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H I S W R I T I N G S ,

AND

H I S P H I L O S O P H Y .

BY GEO. L. CRAIK, M.A.

IN THREE VOLUMES.

VOL. I.

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BACON;

AND HIS WRITINGS, AND HIS PHILOSOPHY.

INTRODUCTION.

Bacon has himself said, that, although some books may be read by deputy, and extracts made of them by others, they should be only in the less important arguments and meaner sort of books, "else," he adds, "distilled" they are like common distilled waters, flashy things." This is in his essay entitled 'Of Studies;' and undoubtedly the works of a great writer can only be properly read in their original form.

But abridgements, compendiums, analyses, even of the works of the greatest writers, may still serve important purposes. If properly executed, even the student of the original works may find them of use both as guides and memorancera. A good compendium should be at the best index and synopsis. The more extensive the original book, or books, the more is such a compendium and analysis wanted, not to supersede or be a substitute for the original, but to accompany it as an introduction and instrument of ready reference. It is like a map of a country through which one has travelled, or is about to travel; or rather it is like what is called the key-map prefixed to a voluminous atlas, by which all the maps are brought together into one view, and their consultation facilitated.

To the generality of readers, again, a comprehensive compendium in a small compass of an extensive and various mass of subjects is calculated to be more than such a mere conventional table of contents or ground-plan. In the same way Bacon has said, "*Some books are to be tasted,*

others to be swallowed, and some few to be chewed and digested; that is, some books are to be read on parts, others to be read, but not curiously; and some few to be read wholly, and with diligence and attention. This must be understood, from the title and whole of the essay, to be addressed to students—to the comparatively few a large portion of whose time is occupied with books. If the illustrious author had been treating of the subject of reading in general, with the “great faculty,” as he has himself called it, which he possessed to so eminent a degree, of contracting his view as well as dilating and dispersing it, of making his mental microscope to discern the parts of whatever he investigated as well as a telescope to take in the whole, he would not have omitted to remark also, that the same book is often to be read in one way by one man and in another way by another. We cannot have a better example than his own writings. In their entire form they fill many volumes, they have been collected in the four large folios, in five quartos, in a dozen or octavos. Let the student of literature or philosophy say again, by all means read and inwardly digest every page of them; but it would be the height of pedantry to recommend that anything like that should be done to all readers. Even if the entire body of Bacon’s works were produced at so small a cost as to be within the reach of all readers, the time to peruse them would be wasted. Nor, even if such of them as are not in English were all translated (which they have not yet been), or if they be found to be all, or nearly all, of universal interest. Another remark that Bacon himself would have failed to make if he had been examining the question of reading books in its whole extent, and on all occasions, is, that, with few exceptions, all books lose something of their first importance, at least for the world at large, with the lapse of time. Works of science, or of practical knowledge, especially, are always to some extent superseded, at least for their main or primary purpose, by the growth or extension of that very branch of know-

they may have been the first to set before the lantern, as the torch may be dimmed and made use of the greater light it has itself served to kindle. Of what Bacon has left us is interesting now only because either been or seemed to be of importance at the time when it was first published; that is to say, only evidence of the state of knowledge in those days. It is the same thing that we have elsewhere in antiquity, or is the rudimentary conception of what is fully brought out elsewhere. To the student of the history of science, or of the progress of thought and discovery in the mind of Bacon, all these indications are most precious; he will scrutinise them all anxiously and will even wish that they were more numerous. As the results of such scrutiny principally that the reader wants; at most a few specimens of the facts and variations and exploded errors will be set before him. Is nobody to be thought entitled to say anything about Bacon and his philosophy—about which everybody has heard so much—who cannot or will not make himself master of every line that Bacon has written? Here, as in all other cases, there is one kind of knowledge which the professed student of the subject in question requires, and quite another which suffices for the general reader—who may be contented as a mere looker on at the operation which nature is carrying on. It is right that such an observer should have understanding enough of the matter to apprehend what he sees done; it is not at all necessary that he should be able to do it. Even if the present education were to be universally diffused, still men must have their attention more especially directed to different departments of knowledge, some to another; and even in every department there must still be the few highly instructed, and the many to whom the subject is given only in its outlines and general principles. In this knowledge of what is called the Baconian philosophy we hope to present our readers with the materials for acquiring in these volumes. Our plan, of presenting for the most part Bacon's own words, will have at

least the advantage of trustworthiness and safety; duty will be to confine ourselves principally to narration, and to deal but little either in controversy or criticism. The only respect, therefore, in which we have to draw upon the confidence of the reader is that we exhibit all the evidence which is material to any disputed point.

But what is understood by the Baconian philosophy only one of the things to which the extant writings of Bacon relate. About half of the entire body of his works, even if we exclude his Letters, has nothing to do with his system or method of philosophy. If we confine ourselves to his English writings, the portion of them which relates to his method of philosophy will be found to be less than a third of the whole. The other two thirds are occupied with matters Moral, Theological, Natural, Political, and Legal.

Bacon is a great name both in the history of philosophy and in our English literature. At the same time, with the exception of his Essays, what he has written is very little known to the general reader. He is therefore, exactly in the position which seems to be the most expedient that an account of his works should be given, and so much of them as can be made generally accessible, being produced for popular perusal, in such a form as to be of use at the present. It is the object of the series of analytical accounts of great writers, to which the present volume belongs, to introduce the most numerous class of readers to an actual acquaintance with those chief works, in our literature and in that of other countries, with the authors of which at least of the authors of which everybody is acquainted. And this we believe to be likely to prove by far the most effectual way of promoting the more general study of these works in their original and complete form.

PART I.

FRANCIS MORAL, THEOLOGICAL, AND
HISTORICAL WORKS.

SECTION I.—THE ESSAYS.

FATHER of Francis Bacon was Sir Nicholas Bacon, who held the Great Seal from the accession of Queen Elizabeth in 1558 till his death in 1579; his mother was the second of the four learned daughters of Sir John Cooke, of whom the eldest married Lord Burghley, the third Lord Russell, son of the second Earl of Russell. She was the second wife of Sir Nicholas, and had by a former wife three sons and three daughters.

Francis was the younger of two sons by the second marriage, the other being named Anthony.

He was born in London, at his father's residence, York House,* from having been properly the town house of the Archbishops of York. Mr. Montagu tells us that it is the same house which is now numbered 31, being the corner house on the west side of Villiers Street; but Villiers Street is only one of several streets which were built upon the grounds of York House, which was disposed of by the second Villiers Duke of Buckingham some years subsequent to the Restoration.

York House was rented from the Archbishop of York not only by Sir Nicholas Bacon, when Lord Keeper of the Great Seal, but by his successors in the same office, or in that of Lord Treasurer, Sir John Puckering, Lord Ellesmere, and finally by his son. It was afterwards acquired from Archbishop Laud by the crown, and bestowed by James I. upon the Duke of Buckingham.

tion. The common account of this York House,—it must not be confounded with the earlier York House or York Place, so called from having been the archiepiscopal residence till it was purchased by Henry VIII. Cardinal Wolsey in 1530, which stood on the site of Whitehall, and of which a portion still remains the official residence of the Comptroller of the Exchequer—is, that it stood a little to the west of Inigo Jones's handsome erection still called the York Stars Water in the midst of a garden skirted by the river. We do not know if any part of it extended to the street. The expression of Bacon's first biographer, Dr. Rawley, in his account as translated by himself into Latin, which is in so minute particulars more precise and accurate than the original English, is, that he was born in York *“infra plateam dictam le Strand,”* which would seem to mean, not in the Strand, but below or back from it.

His birth took place, according to Rawley, on the 22nd of January, 1560. But, as we are afterwards told that at his death, in April, 1626, he was only in his sixth year, by January, 1560, must be meant, as was the usual mode of computation, what we should now call January, 1561.*

He was sent to Trinity College, Cambridge, when he was only in his thirteenth year, along with his brother Anthony, who was his senior by two or three years. They were both matriculated as members of the university on the 10th of June, 1573. It is not very clear how long he remained at Cambridge. Mr. Meibomius makes him to have left after a residence of only two years,† but Rawley, in his English ‘Life,’

* Dugdale, however, in his ‘Baronage,’ vol. ii., pp. 45, 46, as the account is reprinted by Archbishop Tenison in ‘Baconiana,’ p. 246, makes him to have been born on the 2nd of Elizabeth, which would be in January, 1560. He afterwards contradicts himself by stating (p. 257) that at his death in April, 1626, he was in the sixty-sixth year of his age.

† Life, p. x. Six pages after, indeed, he says that he was sent to France “after three years residence in the Univer-

that he was commorant in the university, about six-
 years of age (as his Lordship hath been pleased to
 write into myself), he first fell into the dislike of the
 philosophy of Aristotle; not for the worthlessness of the
 philosophy to whom he would ever ascribe all high attri-
 butes, but for the unfruitfulness of the way; being a
 philosophy, as his Lordship used to say, only strong for
 disquisitions and contentions, but barren of the production
 of any thing for the benefit of the life of man. In which
 he continued to his dying day." In the subsequent
 translation the expression he uses is slightly dif-
 ferent and somewhat more precise:—"tantum non sex-
 annos aetatis nato," when he had all but completed
 his sixteenth year. The time referred to, then, may be
 supposed to have been towards the close of the year 1576.
 This computation agrees very well with what follows in
 Bacon's account.—"After he had passed the circle of
 natural arts, his father thought fit to frame and mould
 him to the arts of state; and, for that end, sent him
 to France with Sir Amyas Paulet, then employed
 as ambassador to France." According to Mr. Mon-
 taigne (Note O), Sir Amyas Paulet was sent as am-
 bassador to France in September, 1576, although he
 immediately subjoins an extract of a letter from Sir Amyas,
 dated 22nd June, 1577, in which, writing to a friend in
 England, he says, "One year is already spent since my
 departure from you." In his *Sylva Sylvarum* (Experi-
 ment 97) Bacon himself speaks of having been at Paris
 when he was "about sixteen years old."
 With the exception of a short visit to England with
 his father from the ambassador to the queen, which must
 have been made before December, 1578, when Sir Amyas
 returned, Bacon remained in France till after the
 death of his father, which took place in February, 1579.
 In the *Sylva* (Experiment 986) he mentions having been
 in France when he received the news. His later biogra-
 phers make him to have spent some time after the re-
 turn of Sir Amyas Paulet in visiting the provincial parts
 of France, and there are some traces in his writings
 of having at least once made an excursion to the

south-west. In his *Sylva* (Experiment 365) he mentions a mode of thickening milk practised in a village near Blois, in such a manner as if he had seen it; and in another work of his latter years, *Historia Vitæ et Mortis*, he records a conversation he had had with a person whom he met when he was a young man at Poitiers. In the Sixth Book of the *Augmentis Scientiarum*, he gives an account of a method of cyphers which he says he invented when he was a young man at Paris. It was in that capital, no doubt, that he spent by far the greater part, if not the whole, of the two years and a half, or thereby, that he seems to have remained abroad. Mr. Montagu mentions, as a fact illustrative of the impression he had already begun to make, "that an eminent artist, to whom, when at Paris, he sat for his portrait, was so conscious of his inability to do justice to his extraordinary intellectual endowments, that he has written on the side of his picture, *Si tabula daretur digna, animum mallem*" (If a canvas were worthy of it, I should prefer a picture of his mind). This is the portrait of which Mr. Montagu has given an engraving in the first volume of his edition of the works of Bacon, where it is described as a miniature by Hillyard.

It appears that Bacon was entered a student of Gray's Inn on the 21st of November, 1576; his four brothers, Nicholas, Nathaniel, Edward, and Anthony, being all entered on the same day.* He was made a Benchet of his inn in 1586; and in 1588 he was elected Reader. In Gray's Inn he erected, Rawley, writ

* The true date of Bacon's admission as a student of Gray's Inn was, we believe, stated for the first time in an article in the 'London Review,' No. IV. (for October, 1835, p. 100, note. It had been assumed by Mr. Montagu, that he did not commence the study of the law till 1580. The authority referred to by the London Reviewer, is the Harleian MS., in which is described as "a large volume of copies of the records of Gray's Inn." The original admission-book for this date is lost.

He says, "that elegant pile or structure common by the name of the Lord Bacon's Lodgings, he inhabited by turns the most part of his few years only excepted) unto his dying day." "Inments in which Lord Bacon resided," says Mr. "are said to be at No. 1, Gray's Inn Square, the side, one pair of stairs; I visited them in 2. They are said to be, and they appear to same state in which they must have been for so centuries; handsome oak wainscot, and a ornament over the chimney-piece." "In the Mr. Montagu adds, "there was, till within two or four years, a small elevation surrounded called Lord Bacon's Mount, and there was a at the trees were planted by him; they were to raise the new building now on the west side den, and they stood about three-fourths from end." The elms in the walks were also Bacon, when he was Double Reader, in the

Montagu gives from the original preserved among his MSS. a letter of Bacon's to Lord Burghley, May, 1586, from which, he says, it appears that some time before applied to the Lord Treasurer and within the bar, or to be made what was then inner barrister. But this was no doubt merely motion to be made a benchers, his promotion to which Mr. Montagu has previously noticed. The barristers of that day were the benchers and the term having reference to the bar, not of the of the hall of the inn, and the place occupied at the readings and exercises of the house. The however, is interesting for what Bacon says of his disposition and habits at this date. "I find he writes, "that such persons as are of nature as myself is), whereby they want that plausible which others have, are often mistaken for but once I know well, and I most humbly your Lordship to believe, that arrogancy and being is so far from my nature, as, if I think

well of myself in anything, it is in this, that I am free from that vice." In his thirtieth year, according to Mr. Montagu (meaning apparently the year 1589), Bacon was appointed Queen's Counsel learned extraordinary, "an honour," it is added, "which until that time had never been conferred upon any member of the profession." Rawley calls it "a grace (if I err not) seldom known before."*

It appears to have been from about this date that Bacon began to attach himself to the prevalent favourite, the Earl of Essex. Nevertheless, it was at this very time† that his relations with the Cecils hostile to Essex and his faction, procured for him the reversion of the valuable place of Register of the Star Chamber. It was worth about 1600*l.* per annum ;

* Mr. Jardine, in 'Criminal Trials' ('Library of Repeating Knowledge'), 1832, vol. i. p. 386, note, observes "it does not distinctly appear at what time Bacon received his nomination as Queen's Counsel." Mr. Jardine adds, "He is said to have been the first King's Counsel under the degree of Sergeant."

† We do not find that Mr. Montagu anywhere assigns a precise date to this appointment, although he notices it in the year 1591 ('Life,' p. xxvi.). But Dugdale (in 'Baconiana,' p. 247) states that Bacon was made one of the Clerks of the Council in 32 Eliz., quoting as his authority the Patent Rolls of that year, p. 11. The 32 Eliz. extended from Nov. 1589 to Nov. 1590. This, we suppose, is the same appointment which Rawley designates as that of Register of the Star Chamber; the Judges of the Court of Star Chamber having been the Lords of the Council, or chief ministers of the crown. Indeed it is clear, from a comparison of various passages in the *Egerton Papers* (edited by Mr. Collier for the Camden Society, 4to. London, 1840), that the office which Bacon held the reversion, was called indifferently Clerkship of the Council, or the Clerkship of the Star Chamber (*Confer* pp. 272 and 429). Mr. Collier, however, who appears to be mistaken in his assertion, at p. 266, that Bacon did not obtain the reversion of the Clerkship of the Star Chamber till some time after his disappointment in regard to the office of Solicitor-General.

" says Rawley, " he waited in expectation either for near twenty years, of which his lordship would be in Queen Elizabeth's time, that it was like another's ground butting [abutting] upon his house, which might mend his prospect, but it did not fill his barn. Nevertheless, in the time of King James it fell unto him."

But it can scarcely be made matter of charge against Elizabeth or her ministers, as the worthy chaplain's zeal would almost make it, that the office did not become vacant sooner. Bacon's failure in obtaining the present provision, he goes on, " might be imputed, so much to her Majesty's averseness or disaffection towards him, as to the arts and policy of a great statesman [he means Burghley], who laboured by all artful and secret means to suppress and keep him down. Next, if he had risen, he might have obscured his glory." According to Mr. Collier (*Egerton Papers*, 263), " there is some reason to think that Bacon at the time acted as private secretary to Sir Robert Cecil." This was perhaps at a date considerably later; for a letter which gives occasion to the remark, and which is stated to be addressed in the hand-writing of Bacon, is dated the 25th of December, 1597.

Long ere now, however, Bacon had commenced his career as a politician. Instead of having, as is commonly said, first entered parliament in 1592, it appears from Willis's *Notitia Parliamentaria* and D'Ewes's *Records* that he had sat in every House of Commons from the fifth parliament of Elizabeth, which met in 1585. He was returned to that parliament for Melcombe Regis; to Elizabeth's sixth parliament, which met in 1586, for London; to her seventh, which met in 1588, for Liverpool; to her eighth, which met in 1592, for Middlesex; to her ninth, which met in 1597, for Ipswich; to her tenth, which met in 1601, for both Ipswich and St. Albans; when he elected to serve for the former place, to the first parliament, which met in 1603, again for the same two places, when he elected, as before, to serve for both; and to James's second parliament, which

met in 1614, for St. Alban's, for Ipswich, and for the University of Cambridge, when he elected to serve for last. It seems to have been in the more spacious of the House of Commons that Bacon's eloquence broke forth so as to attract observation. One accession, indeed, is, that it was not till 1594 that he made his pleading at the bar, his previous professional practice having been confined to his chambers, or at the most the inferior courts.* The description that has been given of his oratory by Ben Jonson would seem to be a special reference to his speaking in Parliament:—"It happened in my time one noble speaker, who was for gravity in his speaking. His language, where he came to spare or pass by a jest, was nobly censorious [concomitant like]. No man ever spake more neatly, more precisely more weightily, or suffered less emptiness, lessiness, in what he uttered. No member of his speech consisted of his own graces. His hearers could not come or look aside from him, without loss. He commanded where he spoke, and had his judges angry and pleased at his devotion. No man had their affections more under his power. The fear of every man that heard him lest he should make an end."†

In 1592, also, appeared Bacon's first publication so far as is known: 'Certain Observations upon a Declaration published this present year, 1592, entitled A Declaration of the True Causes of the Great Troubles proposed to be intended against the Realm of England.' It will fall to be noticed when we come to give an account of his political writings.

On the promotion of Sir Edward Coke to be Attorney

* B. Brit. 2nd edit., vol. i. p. 494.

† 'Discoveries;' Works, by Gifford, ix. 164. To Jonson we are also indebted for the knowledge of a peculiarity in his manner of speaking:—"My Lord Chancellor of England wringeth his speeches from the strings of his band, and his counsellors from the picking of their teeth."—*Conversation with Drummond*, edited by Mr. D. Laing for Shakespeare Society, Soc. Lond., 1842, p. 25.

ral, in April, 1594, Bacon became a candidate for vacant office of Solicitor-General; but another person eventually appointed. Upon this the Earl of Essex, had exerted himself in his friend's behalf with extraordinary zeal, and took his failure much to heart, and recently presented him with an estate near Twickenham which he afterwards sold for 1800*l*. The fact has circumstantially related by Bacon himself.

1596 he completed and dedicated to the Queen a collection of some of the Principal Rules and Maxims of Common Law, with their Latitude and Extent; this work was not published till 1630, some years after the author's death, when it was printed along with another tract subsequently written, 'The Use of the Law, the Preservation of our persons, goods, and good names, according to the practice of the laws and customs of this Kingdom,' both being included under the title of 'The Elements of the Common Law of England.*'

And now we come to the publication of the first edition of the *ESSAYS*, which appeared in a small 8vo. volume, under the following title:—'Essayes. Religious; Medicines. Places of Perswasion and Disswasion. Seene lowered. At London. Printed for Humfrey Hooper, where to be sold at the blacke Beare in Chauncery 1597.'

Only the leaves are numbered, and there are 5 of them in all, in two series; of which the first, extending to 13 leaves, is occupied with the *Essays*. The 14th leaf presents the following new title:—'Medicines Sacrae. Londini. Excudebat Johannes Windet.' Then follow, on 14 more leaves, the *Meditationes Sacrae*, in Latin, being the same that are called *Religious Meditations* on the first or general title.

The leaf numbered 16 of this second series presents a third title:—'Of the Coulers of good and evill, judgement. 1597;' and it is followed by 16 leaves con-

Mr. Montagu, however ('Life,' p. xxxv.) appears to connect the 'Maxims' and the 'Use' as having originally formed one work. The Dedication to Elizabeth, and the Preface, apply only to the 'Maxims.'

taining the tract so called, being the same that is of the *Places of Perswasion and Disswasion* in the general title. The *Meditationes Sacrae* are printed in the Italic letter, the *Essays* and *Colours* in the Roman. On the back of the last leaf are the words—"Printed at London by John Windet for Humfrey Hooper. 1597."*

We may observe, that, notwithstanding the date 1597, it is most probable that the volume really appeared in the early part of what we should now call the year 1598. The *Essays* are inscribed by the author "To M. Anthony Bacon, his deare Brother;" the Dedication being dated "From my chamber at Graies Inne this 30 of January 1597." This would mean January, 1598, according to the then usual mode of computation.

There is another edition of the same collection, exactly the same title-page, except only that the date is 1598. It may have appeared, therefore, either in the same year with the former or in the beginning of the year 1599. It is in 12mo., and the page is of a smaller size than in the former. Only the leaves, of which there are 50, are numbered. It is not so neatly printed as the edition marked 1597; but the chief difference is in the *Religious Meditations* are now in English. These particular are full of the grossest misprints—all of which have been carefully preserved in Mr. Montagu's edition.

The only other known impression of the same collection (having also the *Meditations* in English) is a 8vo, "printed at London for John Jaggard, dweller in Fleete Streete, at the hande and Starre, near Toles Barre. 1606." The date of the Dedication is also altered.

* Mr. Montagu says that the 'Religious Meditations' were not printed, as the 'Essays' are, for Hooper. But in the sentence but one he says, "Although the name of Hooper does not appear in the title prefixed to the 'Meditationes Sacrae' it is evident that Windet was the printer for Hooper." The first or general title-page shows clearly enough that the volume was printed for Hooper. Mr. Montagu also expresses himself as if the 'Places of Perswasion and Disswasion' were a second title of the 'Religious Meditations.'

re the rudimentary forms of compositions after-inserted among the *Essays*.

next edition that has been discovered is dated and contains 38 Essays; namely, nine of those published (the 8th, entitled 'Of Honour and Reputation,' being omitted), and 29 new ones. Of the rest are reprinted, also, several are considerably enlarged.

The Table of Contents enumerates 40 Essays; the two last, entitled 'Of the Public,' and 'Of War and Peace,' are not given.

Fifth edition, also dated 1612, appears to be a piracy of Jaggard's. It contains 39 Essays; the 10 formerly printed (but without the enlargement) and the 29 new ones. It has likewise the *Religious Meditations*, and the *Places of Persuasion and Conviction*.

Sixth edition is also by Jaggard, and is dated 1612. It is a transcript of the Fourth edition, with the addition of the Essay 'Of Honour and Reputation,' there wanting. It contains, therefore, the same 39 Essays as the Fourth edition, but differently arranged, and with several of them extended and altered.

Seventh is an Edinburgh edition, printed for James Hart, and dated 1614. It is a copy of the last edition.

head in Paul's Churchyard. 1625.* It contains the *Essays*; namely, the 38 published in the Fourth edition and 20 additional ones. Several of those formerly published have also new titles, and are otherwise altered.

In the original Dedication of the *Essays* to Anthony Bacon, his dear Brother, Bacon says, "Thy dear and Beloved Brother, I do now like some that his orchard ill neighboured; that gather their fruit before it is ripe, to prevent stealing. These fragments of my conceits were going to print; to labour the stay of thee has been troublesome, and subject to interpretation; if they then pass had been to adventure to the wrong they receive by untrue copies, or by some garnishment; it might please any that should set them forth to be upon them." From this it may be inferred that, when then common, they had already been for some time circulating in manuscript. He goes on to speak of them having passed long ago from his pen, and intimates that they are now published as they were originally written. And in this statement, it should be observed, he does not refer to all the contents of the little volume—*Meditations* and the *Colours of Good and Evil*, but only as to the *Essays*.

The short address concludes with an expression of strong affection, which is further interesting for its closure, at this early date, of what appears to have been Bacon's conviction in regard to his own true spirit, at the close as well as at the outset of his public life. In the depth of their reciprocal love, he says to his brother,

* We have abstracted the notices of the last six editions, as well as we could, from Mr. Montagu's *Life*, note 3 I. But in his tabular comparison of the edition of 1625 with the regular edition of 1612, he states the 1st Essay of the former to be the same with the 1st of the latter, whereas it is quite different and new; the 3rd of the former to be new, whereas it corresponds in great part with the 1st of the latter; and the 29th of the former to be new, whereas it is an extension of the 38th of the latter.

† That is, as we should now say, to misconstruction.

‡ To risk.

me, I sometimes wish your infirmities trans-
 myself, that her Majesty might have the
 active and able a mind; and I might be,
 confined to these contemplations and studies,
 as the fittest." Mr. Anthony Bacon, who
 of great ability and accomplishment, was
 so afflicted with gout as to incapacitate
 him, and died in 1601 or 1602. When the
 republished in 1612, increased to four times
 in number and extent, but without the *Medi-
 cal Colours of Good and Evil*, the former of
 been now mostly turned into Essays, while
 the last was reserved to be incorporated in the
 his *Scientiarum*, Bacon dedicated them to Sir
 John, who was married to a sister of Lady
 says, "My last Essays I dedicated to my
 Mr. Anthony Bacon, who is with God.
 Amongst my papers this vacation, I found others
 nature; which if I myself shall not suffer to
 smother the world will not, by the often print-
 ermer." These last words may lead us to
 Jaggard's edition of 1606 (supposed to be
 the last not been the only re-impression of the
 essays after their first appearance in 1597 or
 though no other intermediate edition is now

from a letter first published in Stephens's
 edition ('Letters and Remains,' 4to., Lond.
 Bacon had originally designed to dedicate
 the edition to Henry Prince of Wales, who died
 in November in that year. The book, there-
 fore, did not come out till towards the end
 or perhaps not till after the beginning of
 the letter is in fact the intended Dedication to
 "Having," Bacon begins, "divided my
 contemplative and active part, I am desirous
 that your Majesty and your Highness of the fruits of
 though they be." The Essays he goes on
 with only "brief notes, set down rather signifi-
 cantly." "The word," he continues,

" is late, but the thing is ancient ; for Seneca's Epistles, Lucilius, if you mark them well, are but Essays, these dispersed meditations, though conveyed in the form of Epistles." As for the present compositions, he adds he has " endeavoured to make them not vulgar, but of a nature whereof a man shall find much in experience and in books, so as they are neither repetitions nor fancies."

It was Bacon's practice to improve and make additions to the Essays throughout his life. In the letter to Bishop Andrews prefixed to his tract entitled 'Advertisement touching an Holy War,' which was written in 1622, he says, after speaking of his other writings, " As for my Essays, and some other particular of that nature, I count them but as the recreations of other studies, and in that sort purpose to continue them, though I am not ignorant that those kind of writings would, with less pains and embracement, perhaps, yet more lustre and reputation to my name than those of which I have in hand." From what has been stated will be seen that the successive forms which the work assumed as published by the author are to be found in the three editions of 1597 (or 1598), of 1612 (the reprinted edition of that date), and of 1625. The last-mentioned edition is dedicated to the potent royal favourite, Villiers, Duke of Buckingham, between whom and Bacon a most intimate alliance had subsisted from the first appearance of the former at court. Having dedicated his *Instauration to the King*, and his *History of Henry Seventh*, as also his portions of *Natural History* (including certain tracts in what is called the Third Part of the *Instauration Magna*) to the Prince (that is Prince Charles, afterwards Charles I.), Bacon informs his grace that he now dedicates the Essays to him ; " before," he says, " of the best fruits that, by the good increase which God gives to my pen and labours, I could yield." Of all his other works, he observes, they have been the most current ; " for that, as it seems, they come home to men's business and bosoms." And he has enlarged *them*, he states, " both in number and weight ; so that they are indeed a new work." " I thought it

teable, "agreeable to my affection and obligation Grace to prefix your name before them English and in Latin; for I do conceive that the more of them, being in the universal language, so long as books last." He takes care to intimate he has now also translated his 'Henry the 8th into Latin:—the Instauration and the Natural History were originally published and written in that

But the Latin version of the Essays, of which Rawley speaks, was not printed till some years after his death, and the translation of the History of Henry 8th, along with other pieces, were first published Rawley, in a folio volume, at London, in 1638. The title, which was given to the Essays by Bacon is 'Sermones Fideles, sive Interiora Rerum.'† Rawley seems to consider the translation as being good throughout—quoting, oddly enough, as the title of them given by Rawley, 'Sermones Fideles, Memoratissime Auctore, præterquam in paucis, et donatus.' We need not say that the learned was incapable of writing anything like this. The title-page (for it is from that that the words cited) describes as for the most part turned into Bacon himself is not the Sermones, but the same, the general title of which is 'Moralium Liber Primus Tomus.' As it contains the voluminous *De Scientiarum*, and other long treatises, and now form a very small part of it, they may be a few things of which the author himself was translator. In his Life of Bacon, it is true, both English and in the Latin, Rawley seems to set the Latin translation of the Essays among his own performances. But, on the other hand, we find himself, in a letter to his friend Mr. Toby, without date, but apparently written in 1622

expression in the Latin is quite explicit:—"Quam latinum verti."

Bacon states in his Latin Letter to Father Fulgentio, probably in 1624.

or 1628,* expressing himself in a way which implies at least that he did not then intend to be his own translator. "It is true," he says, "my labours are most set to have those works which I had formerly published, as that of *Advancement of Learning*, *Henry Seventh*, that of the *Essays*, being retracted and made more perfect, well translated into Latin with the help of some good pens, which forsake me not; for modern languages will at one time or other prove bankrupts with books, and, since I have lost much labour with this age, I would be glad, as God shall please, to leave, to recover it with posterity." And Archbishop Tenison says expressly, speaking of the *Essays*, "The Latin translation of them was a work performed by many hands; by those of Dr. Hacket (late Bishop of Exeter), Mr. Benjamin Johnson (the learned and industrious poet), and some others, whose names I once heard of; Dr. Rawley; but I cannot now recall them." In the Latin edition he gave the name of *Sermones Fideles*, in the manner of the Jews, who called the words, or observations of the wise, *Faithful Sayings*; or credible propositions, worthy of firm assent and acceptance. And, as I think, he alluded more particularly in this title to a passage in Ecclesiastes (xii. 9) where the preacher saith that he sought to find *Verba Delectabilia* (as Tremellius rendereth them, *pleasant words* (that is, perhaps, his *Canticles*), and *Verba Fidelia* (as the same Tremellius rendereth them, *faithful sayings* (meaning, it may be, his collected *Proverbs*)). In the next verse he calls them *Words of the Wise*, and so many goads and nails given of *the shepherd*, from the same shepherd (of the flock of Israel).† Bacon himself, in his letter to Father Gentio, intimates that he preferred the title *Sermones*.

* * The letter is placed by Birch, in whose collection it was first published, under the year 1623; but, as it seems to be of the Latin translation of the 'Advancement of Learning' which was published in that year, as only in progress, it may have been written in 1622.

† Introduction to 'Baconiana,' 1670, p. 61.

Stiles, as weightier than that of *Saggi Morali* which had been given to the Essays in the Italian translations; "Verum illi abro nomen gravius impono."

It is a curious fact that at one time Bacon's Essays appear to have been generally known and read only in English translation from the Latin. Thus, the writer of the Life of Bacon in the first edition of the *Biographia Britannica*, published about the middle of the last century, tells us that it is from the Latin translation we have the Essays in Bacon's Works, referring to what is called Mallet's edition, which appeared in 1753. Hume, it may be remarked, has described Bacon's prose as artless. And, what is still more surprising, Dugald Stewart, in his Preliminary Dissertation to the *Encyclopædia Britannica*, written and published within the last thirty years, expresses his astonishment that Bacon's English style should have been preferred by Bishop Burnet to that of Sprat! If, indeed, his wonder had been that so just a judgment should have proceeded from Burnet, it would be more intelligible; but, on the contrary, Burnet is strangely enough brought forward as "no contemptible judge of style," and it is declared to be difficult to conceive on what grounds he proceeded in hazarding so extraordinary an opinion." The passage occurs in a note at p. 40 (last edition); and is followed up by an exclamation about the inferiority, "in all the higher qualities and graces of style," of the prose compositions of Swift to those of Pope and Addison. We need not say that an editor of Bacon's Essays would now be thought out of his senses who should give them any other English than Bacon's own.

As the Essays stand in Bacon's last and most complete edition, Two Italian translations bearing this title had already appeared, (one in 1618 by Mr. Toby Mathew), the other in 1621. A French translation had also been published at London in 1619, under the title of '*Essays Moraux*.' This was the work of Sir Arthur Gorges, the common friend of Bacon and Montaigne, and also the English translator of Bacon's treatise '*De Rebus Veterum*.' Mr. Montagu everywhere gives the name of Gorges, we do not know upon what authority.

plete edition, the first is entitled 'Of Truth,' and follows:—

'What is Truth?' said jesting Pilate, and would not give for an answer. Certainly there be that delight in giddiness and count it a bondage to fix a belief; affecting free-will in thinking, as well as in acting. And though the sects of sophists of that kind be gone, yet there remain certain dissuading wits, which are of the same veins, though there be much blood in them as was in those of the ancients. But not only the difficulty and labour which men take in finding out of Truth, nor again, that when it is found, it imponeth upon men's thoughts, that doth bring lies in favour; but natural, though corrupt, love of the lie itself. One of the school of the Grecians examineth the matter, and is at a loss to think what should be in it that men should love lies; neither they make for pleasure, as with poets, nor for advancement as with the merchant, but for the lie's sake. But I cannot think this same Truth is a naked and open daylight, that doth show the masques, and mummeries, and triumphs of the world half so stately and daintily as candle-lights. Truth mayhaps come to the price of a pearl, that showeth best by the sun; but it will not rise to the price of a diamond or carbuncle, which showeth best in varied lights. A mixture of a lie doth add pleasure. Doth any man doubt, that if there were taken out of men's minds vain opinions, flattering hopes, false valuations, imaginations as one would, and the like, but it would leave the minds of a number of men, poor shrunked and full of melancholy and misdisposition, and displeasing to themselves. One of the Fathers, in great severity, called it *Vinum Dæmonum*,* because it filleth the imagination, yet it is but with the shadow of a lie. But it is not the lie that passeth through the mind, but the lie that sinketh in and cleaveth in it, that doth the hurt, such as we spake of before. Howsoever these things are thus in men's depraved judgments and affections, yet truth, which only doth judge itself, teacheth that the inquiry of truth, which is the love-making or wooing of it; the knowledge of truth, which is the presence of it; the belief of truth, which is the enjoying of it, is the sovereign

* The wine of devils. (The translations throughout the *extracts from the Essays* are the same as in the edition, *notes*, by Dr. W. C. Taylor, 8vo., Lond., 1840.)

yet excellently well: 'It is a pleasure to stand upon and to see ships tossed upon the sea; a pleasure to be in the window of a castle and to see a battle, and the view thereof below; but no pleasure is comparable to the view upon the vantage-ground of truth—(a hill not to be ascended, and where the air is always clear and serene)—free from the errors, and wanderings, and mists, and tempests below: so always that this prospect be with pity, without swelling or pride. Certainly it is heaven upon earth to have a man's mind move in charity, rest in providence, and stand upon the poles of truth.

From theological and philosophical truth to the vilest business, it will be acknowledged, even by those who see it not, that clear and round dealing is the honourable nature, and that mixture of falsehood is like alloy in gold and silver, which may make the metal work the better, but it embaseth it. For these winding and crooked ways are like the goings of the serpent, which goeth basely upon the belly and not upon the feet. There is no vice that doth so dishonour a man with shame as to be found false and perfidious. Fore Mountaigny saith prettily, when he inquired the why by the word of the lie should be such a disgrace, and so odious a charge? Saith he, 'If it be well weighed, to say that a man lieth, is as much as to say that he is brave

look aside from him without loss; neither do readers remit their attention for a sentence, or clause of a sentence, without missing a portion of thought. We do not speak merely of the vividness or pregnancy of the expression; that is another quality. What we mean is, that the flow of the reasoning or reflection never pauses, never diminishes. True or false, one new thought, one new view succeeds another as it is possible to exhibit them. Nor is this true only of the Essays, where the style is more formally apt and economical. His other writings are less polished and epigrammatic; but the packing of the thought is nearly as close everywhere. Every word indicates a working, teeming mind. Much of what is said, it may be merely ingenious, some portion of the abundance may be even incumbering, and would, we may think, be better away, but there, at any rate, it is, never-ending and seemingly inexhaustible, at the least the intermixture of wisdom, fancy, and ingenuity in discussion, often a combination and interfusion of all three.

Then there is the uncommonness and characteristic air of nearly all the thoughts. It might be supposed that after any true thing has once been said, and generally felt and accepted, it would pass into common property and cease to be recognisable as the thought of an individual. But it does not so happen. An original thought never loses its stamp of originality. If it has been struck out in an illiterate and unrecording man, it spreads indeed everywhere among the people, but it retains its distinctive shape of a peculiar utterance, a phrase, a verb, and, after having been repeated for a thousand years, it shows like a flash of fire among other thoughts every time it is used. It is the same with an original thought in a book. It always remains new, fresh, and striking. A mere scientific truth may become a commonplace; it is something entirely separate from the mind of the discoverer; but a happily expressed thought is a fragment of the mind which first gave it shape and expression, and will always continue to be something that any other mind would have produced. The

every in astronomy: we could not say from anything is known of the minds of Copernicus, or Galileo, Tycho Brahe, or Kepler, from which of them it proceeded, nor does the mention of it in ordinary circumstances recal its author; no part of its importance, nor of its beauty or its life lies in its connection with it: it has no flavour or character of any kind which it taken from him, or which makes any likeness between him and it. He has thrown it forth as the tissue thrown forth by the loom; a moral saying is more like the grape, that is ever racy of the soil where it grew. As a characteristic thought of Bacon's cannot be taken possession of by any one else and made his own; in the shape of the Baconian form or expression, the thought itself would be changed; it must therefore always retain its peculiarity of aspect which marks it as his, and which will keep it for ever as distinguishable and as striking as it was at first. A discovery made by Kepler might easily, if we were to judge only by the intellectual characters of the two, be attributed to Copernicus; but a verse of Homer's or a sentence of Bacon's will usually, like a picture by Raphael, attest their own paternity. Bacon's manner of writing has been described by his plain and first biographer in the following terms:— "In the composing of his books, he did rather drive at masculine and clear expression than at any fineness or imitation of phrases, and would often ask if the meanings were expressed plainly enough; as being one that counted words to be but subservient or ministerial to matter and not the principal. And, if his style were faulted, it was because he could do no otherwise. Neither was he given to any light conceits, or descanting on words, but did ever purposely and industriously avoid them; for he held such things to be but digressions or diversions from the scope intended, and to derogate from the weight and dignity of the style." What here said of his avoidance of all mere verbal conceits is true, and the fact merits especial attention as notably discriminating the wit of Bacon from that of every other Elizabethan writer eminent for that quality in his age. PRO-

bably nothing resembling a pun, or any quibble of class, is to be found in all that he has written. does he torture thoughts more than words, having given the thought full and fitting expression, he is alone, and passes on to the next. Yet the character of his writing is pre-eminently wit, understood in the largest and highest sense, as the perception and extension of things in their less obvious relations. Upon no topic is he ever trite, or a repeater of what has been said by others; he cannot quote a verse of Scripture without giving it an interpretation of his own. And yet his peculiar view that he takes of everything never, or rarely, appears forced or unnatural, if it be the last that would occur to an ordinary thinker, it looks as if it were the first that had occurred to him.

Much of this comes of the real originality of Bacon's manner of thinking; but the effect is also in part due to his great oratorical skill or art of expression. His manner of his writing is as striking and uncommon as his matter. Or rather, we should say, the arraying and parceling of his thoughts is as brilliant as the thoughts themselves. He has no passion; but no man had more of the mere ingenuity and fancy that belong to eloquence. His style is all over colour and imagery; much so, indeed, that this sort of enrichment may be said frequently to enter into its substance, and to constitute his thoughts rather than to clothe and decorate them. Metaphors, similitudes, and analogies make up a large part of his reasoning,—are constantly brought in as proof and argument as well as for illustration. Not that this forms any objection to the force or soundness of his reasoning. In moral exposition, which is totally different in its nature from mathematical demonstration, as different as a piece of music is from the multiplication-table—what is at all times principally wanted, and the one thing needful, is the spirit and pulse of life that be present in sufficient strength, the manner in which it shows itself, or the source whence it is obtained, of little consequence. Consider what all such exposition

It rarely or never takes the form of pure syl-

reduced to that form. What is called moral
consists, in addition to the historical statement
of facts, mainly of such excitement ad-
dress the reader or hearer as enables and impels
by every thing else for himself—to see the
the same light in which the writer or speaker
has come to the same conclusions. There are
many, we repeat, of producing this effect, accord-
ing to the circumstances of the case. Almost the only
thing that can be universally affirmed is, that the thing
done in the manner of a mathematical demon-
stration of moral questions that mode of reasoning is at
times and, for any continued effort, impossible.
It is accomplished by mere artifice of narration;
by exhibition of the subject in the proper
light, by passionate declamation; by invective;
by epigrams and witticisms; and often, as
well as in any other way, or more so than in any
other, by famous analogies and similitudes and other
illustrations. None of these modes of exposi-
tion are in a strict sense, logically conclusive.

conception in the mind of the reader. Nor is the native manner of thinking, or a figurative style consistent with soundness of judgment or correct exposition. The highest of all truths have been pounded poetically. Many of the highest truths can be conceived at all except imaginatively. A man of imaginative capacity is in the region of thought reasoning to a mind without imagination what in the region of sense the man who sees is to him who is blind. The latter may have a tolerably correct notion of what he can touch and handle; but the former alone can embrace the grand panorama of nature.

¶ The question, however, still remains in how far is a philosopher or sage, as well as an orator—the real amount and character of the truth and wisdom contained in his writings. To what extent are his views subtle and profound? to what extent only superficial? Ingenuity, fancy, eloquence, fertility of invention, never-failing flow of thought of one kind or another, singular sagacity and insight within a certain range may be denied him by none; but with all this the penetration and widest compass of vision may be wanting. Whether or no such be the case, the examination of his works must decide.

The Second Essay, entitled 'Of Death,' first appeared in the edition of 1612. We will give the first part of it:—

Men fear death as children fear to go in the dark; and that natural fear in children is increased with tales, and other. Certainly, the contemplation of death as the end and passage to another world, is holy and religious; but the fear of it as a tribute due unto nature is weak. In religious meditations there is sometimes mixture of vanity and superstition. You shall read in some of the friars' sermons, that a man should think with himself, what pain is, if he have but his fingers' end pressed or tortured; and thereby imagine what the pains of death are when the whole body is corrupted and dissolved, when many times the head smeth with less pain than the torture of a limb: for the head parts are not the quickest of sense. And by

only as a philosopher and natural man, it was well said, *nona mortis magis terret, quam mors ipsa* ;* groans and convulsions, and a discoloured face, and friends weeping, and tears, and obsequies, and the like, show death terrible. It is not the observing, that there is no passion in the mind of a man so weak but it mates and masters the fear of death : and therefore death is no such terrible enemy, when a man hath so many attendants about him that can win the combat of him. Reason triumphs over death ; love slights it ; honour aspireth to it ; grief flieth to it ; fear pre-occupateth it ; Nay we read, that Otho the Emperor had slain himself, pity (which is the tenderest of affections) provoked many to die, out of mere compassion to their sovereign, and as the truest sort of followers. Seneca adds, niceness and satiety ; ‘*cogita quàm diu vivere feceris ; mori velle, non tantum fortis, aut miser, sed etiam fastidiosus potest.*’† A man would die, though he were neither valiant nor miserable, only upon a weariness to do the same thing so oft over and over. It is no less worthy to observe how little alteration in good spirits the approaches of death make. For they appear to be the same men till the last instant.

Then follow some instances of the composure with which strong or well-balanced minds have welcomed death : among others, that of the Emperor Galba, who is said to have exclaimed, holding out his neck to his assassin. *Feri, si ex re sit populi Romani* (Strike, if it be for the good of the Roman people) ; and that of Septimius Severus, whose last words to those about him were, *festina, si quid mihi restat agendum* (Be quick, if anything remains for me to do). The essay concludes thus : —

It is as natural to die as to be born, and to a little infant perhaps the one is as painful as the other. He that dies in an honest pursuit is like one that is wounded in hot blood, who, at the time, scarce feels the hurt ; and therefore a mind that is fixed, and bent upon somewhat that is good, doth avert the

* The parade of death is more terrific than death itself.

† Consider how often you repeat the same things ; the desire of glory may arise not only from fortitude, or misery, but from vanity.

dolours of death.' But above all, believe it, the sweetest kicke is '*Nunc dimittis*'*—when a man hath obtained w^e ends and expectations. Death bath this also—that it open the gate to good fame, and extinguisheth envy. '*Extin-
guamabatur idem*' †

The Third Essay, 'Of Unity in Religion,' is an largement of one which had appeared in the edition 1612. It is longer than usual; but, one or two of passages will suffice as samples of the manner in w^h the subject is treated. Having remarked that "fruits of unity, next unto the well-pleasing of God, w^h is all in all, are two; the one towards those that without the church, the other towards those that within;" the author proceeds:—

For the former:—It is certain that heresies and schism of all others the greatest scandala, yea, more than corruptioⁿ manners. For as in the natural body a wound or solatioⁿ continuity is worse than a corrupt humour, so in the spiri^t. So that noth^g doth so much keep men out of the church, drive men out of the church, as breach of unity; and there whensoever it cometh to that pass that one saith 'Ecce in d^e to,' † another saith 'Ecce in penetrabilibus,' & that is, when men seek Christ in the conventicles of heretics, and others in the outward face of a church, that voice had need continually sound in men's ears, 'Nolite exire,' Go not out. The de^u of the Gentiles (the propriety of whose vocation drew him have a special care of those without) saith, 'If an her come in and hear you speak with several tongues, will not say that you are mad?' And certainly it is little b^e when atheists and profane persons do hear of so many discor^d and contrary opinions in religion; it doth avert them from the church, and maketh them to sit down in the chair of corners.

He afterwards gives the following advice in regard to the true rule or principle of unity:—

Men ought to take heed of rending God's church by

* Lord, now lettest thou thy servant depart in peace.

† The same person shall be beloved after death.

‡ Behold, he is in the desert.

§ Behold, he is in the secret chamber of the house.

controversies : the one is when the matter of the point is too small and light, not worth the heat and strife kindled only by contradiction. For, as it is noted by the fathers, 'Christ's coat indeed had no seam, but the vesture was of divers colours;' whereupon he saith, *varietas sit, scissura non sit*, * They be two things—uniformity. The other is when the matter of the controverted is great, but it is driven to an over-great and obscurity, so that it becometh a thing rather inhuman substantial. A man that is of judgment and understanding shall sometimes hear ignorant men differ, and yet within himself that those which so differ mean one thing yet they themselves would never agree. And if it so pass, in that distance of judgment which is between man, shall we not think that God above, that knows doth not discern that frail men, in some of their conclusions, intend the same thing, and accepteth of both.

The Fourth Essay, 'Of Revenge,' first printed in the year of 1625, the following is the commence-

Revenge is a kind of wild justice, which the more man's nature is to, the more ought law to weed it out. For as for wrong, it doth but offend the law; but the revenge of wrong putteth the law out of office. Certainly, in taking revenge a man is but even with his enemy; but in passing judgement he is superior—for it is a prince's part to pardon. Common, I am sure, saith, 'It is the glory of a man to overcome an offence.' That which is past is gone, and irrecoverable. Wise men have enough to do with things present and therefore they do but trifle with themselves that dwell on past matters. There is no man doth a wrong for the sake, but thereby to purchase himself profit, or pleasure, honour, or the like. Therefore why should I be angry with a man for loving himself better than me? And if he should do wrong merely out of ill nature, why, yet he is like the thorn or briar, which prick and scratch because he doth no other.

Here are the commencement and conclusion of

There may be variety in the vesture, but let there be no di-

the Fifth, entitled 'Of Adversity,' which was of those added in the edition of 1625 :—

It was a Ligh speech of Seneca (after the manner of the Stoics), 'That the good things which belong to prosperity be wished, but the good things that belong to adversity be admired—' *Bona rerum secundarum optabilia, et mirabilia.*' Certainly if miracles be the commandment, they appear most in adversity. It is yet a higher of his than the other (much too high for a heathen), greatness to have in one the frailty of a man and the power of a god—' *Vere magnum habere fragilitatem hominum, et potentiam Dei.*' This would have done better in poetry, where transcendencies are more allowed. And the poets have been busy with it; for it is in effect the thing which is in that strange fiction of the ancient poets, which is to be without mystery, nay, and to have some appearance of a Christian: That Hercules, when he went to fetch the apples of the Hesperides, was like Prometheus (by whom human nature is represented), who was bound to the length of the great ocean in an earthen pot or pitcher, describing Christian resolution that saileth in the flesh through the waves of the world. needle-works and embroideryes it is more pleasing to see a lively work upon a sad and solemn ground, than a dark and melancholy work upon a lightsome ground; therefore of the pleasure of the heart by the pleasure of the eye. Certainly virtue is like precious odours, most fragrant when they are incensed or crushed; for prosperity doth but bring forth vice, but adversity doth best discover virtue.

The Sixth Essay, 'Of Simulation and Dissimulation,' was likewise new in 1625. The following are some of the most material or striking passages :—

Dissimulation is but a faint kind of policy or craft; it asketh a strong wit and a strong heart to know what is truth, and to do it. Therefore it is the weaker sort of men that are the great dissimulators.

Tacitus saith, 'Livia sorted well with the arts of dissimulation of her son, attributing all the glory to Augustus and dissimulation to Tiberius. And Mucianus encourageth Vespasian to take arms against Nero, he saith, 'We rise not against the piercing eye of Augustus, nor the extreme caution or closeness of

species of arts, or policy and dissimulation, or close-
indeed habits and faculties, several, and to be distin-

For if a man have that penetration of judgment as
learn what things are to be laid open, and what to be
and what to be showed at half lights, and to whom,
n (which indeed are arts of state and arts of life, as
well calleth them), to him, a habit of dissimulation is
need and a poorness: but if a man cannot attain to
gment, then it is left to him generally to be close and
blat. For where a man cannot choose or vary in par-
there it is good to take the safest and wariest way
tal, like the going softly by one that cannot well see.
y the ablest men that ever were have had all an
and frankness of dealing, and a name of certainty and
y but then they were like horses well managed, for
did tell passing well when to stop or turn: and at such
han they thought the case indeed required dissimula-
then they used it, it came to pass that the former
spread abroad of their good faith, and clearness of
made them almost invisible. In few words,
are due to secrecy. Besides, to say truth, nakedness
nely as well in mind as body; and it addeth no
verence to men's manners and actions if they be not
or open. As for talkers and futile persons, they are
ly vain and credulous withal; for he that talketh what
eth will also talk what he knoweth not. Therefore set
that a habit of secrecy is both politic and moral. And
art it is good, that a man's face give his tongue leave
; for the discovery of a man's self, by the tracks of his
mice is a great weakness and betraying, by how much
any times more marked and believed than a man's

inclusion, those advantages which are considered
ing to the practice of Simulation and Dissimulation
been enumerated, it is added:—

be also three disadvantages to set it even. ~ The first,
ulation and dissimulation commonly carry with them
of fearfulness, which, in any business, doth spoil the
of round flying up to the mark. The second, that it
and perplexeth the conceits of many, that perhaps
therwise co-operate with him, and makes a man walk
and to his own ends. The third and greatest is, that it

depriveth a man of one of the most principal instruments of action, which is trust and belief. The best composition of temperate is to have openness in fame and opinion, to be in habit, dissimulation in seasonable use, and a power to resist if there be no remedy.

Of the Seventh Essay, entitled 'Of Parents and Children,' which is one of those first printed in 1612, I will be enough to give a few sentences at the beginning.

The joys of parents are secret, and so are their griefs and fears; they cannot utter the one, nor they will not utter the other. Children sweeten labours, but they make miseries more bitter: they increase the cares of life, but they make the remembrance of death. The perpetuity by generation is common to beasts; but memory, merit, and noble works are proper to men: and surely a man shall see the noblest actions and foundations have proceeded from childless men, who have sought to express the images of their minds where their bodies have failed. So the care of posterity is not in them that have no posterity.

We will transcribe the whole of the Eighth, entitled 'Of Marriage and Single Life,' also one of those first printed in 1612:—

He that hath wife and children hath given hostages to fortune, for they are impediments to great enterprises, either of virtue or mischief. Certainly the best works, and of greatest merit for the public, have proceeded from the unmarried or childless men, which both in affection and means have more liberty and endowed the public. Yet it were great reason that those that have children should have greatest care of future generations unto which they know they must transmit their dearest plots. Some there are, who, though they lead a single life, yet their thoughts do end with themselves, and account future generations impertinencies. Nay, there are some others that account their wives and children but as bills of charges. Nay more, there are some foolish, rich, covetous men, that take a pride in having many children, because they may be thought so much the richer. For perhaps they have heard some talk, 'Such an one is a rich man;' and another except to it, 'Yea, but he hath a charge of children,' as if it were an abatement to his riches. But the most ordinary cause of a single life is liberty,

not a poor. It is indifferent for judges and magis-
trates if they be facile and corrupt, you shall have a
five times worse than a wife. For soldiers, I find the
commonly in their hortatives put men in mind of their
wives and children. And I think the despising of marriage
by the Turks maketh the vulgar soldier more base. Cer-
tainly wife and children are a kind of discipline of humanity;
the men, though they may be many times more charitable,
the means are less exhaust, yet on the other side they
are cruel and hard hearted (good to make severe inquisi-
tions because their tenderness is not so often called upon.
Natures, led by custom, and therefore constant, are
only loving husbands; as was said of Ulysses, 'Vetulam
revertit immortalitate.' * Chaste women are often proud
and, as presuming upon the merit of their chastity. It
is the best bond both of chastity and obedience in the
wife to think her husband wise, which she will never do if
he be jealous. Wives are young men's mistresses,
sons for middle age, and old men's nurses; so as a man
may quarrel to marry when he will. But yet he was
one of the wise men that made answer to the question,
'Should a man marry?'—'A young man not yet, an
old man not at all.' It is often seen that bad husbands have

There be none of the affections which have been noted fascinate or bewitch but love and envy. They both have vehement wishes; they frame themselves readily into imaginations and suggestions; and they come easily into the mind especially upon the presence of the objects which are the proper objects that conduce to fascination, if any such thing there be. We likewise, the Scripture calleth envy an evil eye; and astrologers call the evil influences of the stars, evil aspects; that still there seemeth to be acknowledged in the act of envy an ejaculation or irradiation of the eye. Nay, some have been so curious as to note, that the times when the stroke or perception of an envious eye doth most hurt, are, when the envied is beheld in glory or triumph, for that sets an edge to envy, and besides at such times the spirits of the person envied do come forth most into the outward parts, and so meet the blow.

And the following is the concluding paragraph:—

We will add this in general, touching the affection of envy, that, of all other affections, it is the most importune and continual; for of other affections there is occasion given but seldom and then. And therefore it was well said, '*Invidia festos non agit*;' * for it is ever working upon some or other. And also noted, that love and envy do make a man pine, while other affections do not, because they are not so continual. It is also the vilest affection, and the most depraved; for where cause it is the proper attribute of the devil, who is called an envious man, that soweth tares amongst the wheat by night. As it always cometh to pass that envy worketh subtilly and in the dark, and to the prejudice of good things, such as the wheat.

The Tenth Essay, 'Of Love,' is in the collection of 1612. It is not very long, but a few sentences will convey the substance of the whole:—

The stage is more beholden to love than the life of man; for as to the stage, love is even matter of comedies and tragedies; but in life it doth much mischief, sometimes like a syren, sometimes like a fury. You may observe that amongst all the great and worthy persons (whereof memory remaineth, either ancient or recent) there is not

* Envy keeps no holidays.

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been transported to the mad degree of love; which great spirits and great business do keep out this week It is a strange thing to note the excess of it, and how it braves the nature and value of things that the speaking in a perpetual hyperbole is comely but in love. Neither is it merely in the phrase; for, it hath been well said that the arch-flatterer, with the petty flatterers have intelligence, is a man's self, the lover is more. For there was never proud man so absurdly well of himself as the lover doth of the world; and therefore it was well said, that it is impossible and to be wise. Neither doth this weakness appear only and not to the party loved, but to the loved ill, except the love be reciproque; for it is a true rule, is ever rewarded, either with the reciproque or with an ill secret contempt. By how much the more men beware of this passion, which loseth not only other at itself. As for the other losses, the poet's relation figure them; that he that preferred Helena quitted of Juno and Pallas. For whosoever esteemeth too much of amorous affection quitteth both riches and wisdom. Love hath his floods in the very times of weakness, a great prosperity and great adversity, though this hath been less observed: both which times kindle love, it more frequent, and therefore show it to be the child

object of the Eleventh, which is entitled, 'Of love,' and which was also first published in the year of 1612, is more in Bacon's line; and of this though it is of some length, we will subjoin the part:—

In great places are thrice servants—servants of the world, servants of state, servants of fame, and servants of business; they have no freedom, neither in their persons, nor in their times, nor in their times. It is a strange desire, to seek power over liberty, or to seek power over others and to lose one's self. The rising unto place is laborious, and pains men come to greater pains, and it is sometimes followed by indignities men come to dignities. The standing in place, and the regress is either a downfall, or at least a melancholy thing. In the display of place set before thee the best examples; for imita-

tion is a globe of precepts ; and after a time set before thee own example, and examine thyself strictly whether thou dost not best at first. Neglect not also the examples of those who have carried themselves ill in the same place, not to set thyself by taxing their memory, but to direct thyself what to avoid. Reform, therefore, without bravery or scandal of fault to times and persons, but yet set it down to thyself as well to take good precedents as to follow them. Reduce things to their first institution, and observe wherein and how they have degenerated ; but yet ask counsel of both times—of the ancient time what is best, and of the latter time, what is fittest. See that thou make thy course regular, that men may know beforehand what they may expect ; but be not too positive and peremptory, express thyself well when thou digressest from thy rule. Preserve the right of thy place, but stir not questions of jurisdiction ; and rather assume thy right in silence and *de facto*, than voice it with claims and challenges. Preserve likewise the rights of inferior places, and think it more honour to direct a chief than to be busy in all. Embrace and invite helpful advices touching the execution of thy place ; and do not drive away such as bring thee information, as meddlers, but accept of them in good part. The vices of authority are chiefly delays, corruption, roughness, and facility. For delays, keep times appointed, go through with that which is in hand, and interlace not business but of necessity. For corruptions do not only bind thine own hands, or thy servants' hands, from taking, but bind the hands of suitors also from offering ; for integrity, use, doth the one ; but integrity is professed, and with a manifest detestation of bribery, doth the other : and avoid not only the fault but the suspicion. Whosoever is found variable, and changeth manifestly without manifest cause, giveth suspicion of corruption. Therefore always when thou changeest thine opinion or course, profess it plain and declare it, together with the reasons that move thee to change, and do not think to steal it. A servant or a favourer, if he be inward and no other apparent cause of esteem, is commonly thought but a by-way to close corruption. For roughness, it is a needless cause of discontent, severity breedeth fear, but roughness breedeth hate. Even reproofs from authority ought to be grave and not taunting. As for facility, it is worse than bribery ; for bribes come but now and then, but if immunity or idle respects lead a man, he shall never be without fault. Solomon saith, 'To respect persons is not good, for we will transgress for a piece of bread.' It is most true

fully spoken—'A place sheweth the man;' and de-
scend to the better and some to the worse: 'Omnium
capax imperii, nisi imperasset,'* saith Tacitus of
out of Vespasian he saith, 'Solus imperantium Vespasi-
anus in melius'† though the one was meant of
the other of manners and affection. It is an
sign of a worthy and generous spirit whom honour
or honour is or should be the place of virtue; and as
things move violently to their place, and calmly in-
to, so virtue in ambition is violent, in authority settled.
All rising to great place is by a winding stair;
so be factions, it is good to side a man's self whilst he
rising, and to balance himself when he is placed.
Memory of thy predecessor fairly and tenderly; for if
not, it is a debt will sure be paid when thou art gone.
Be colleagues, respect them, and rather call them
look not for it, than exclude them when they have
look to be called. Be not too sensible, or too remem-
thy place in conversation and private answers. Be
let it rather be said, 'When he sits in place he is
man.'

Will give also the whole of the Twelfth, entitled
Incess,' first published in 1625.—

A trivial grammar-school text, but yet worthy a wise
consideration. Question was asked of Demosthenes,
was the chief part of an orator? He answered,

'What next?' 'Action.' 'What next again?'

He said it that knew it best, and had by nature
an advantage in that he commended. A strange thing,
part of an orator which is but superficial, and rather
of a player, should be placed so high above those
de parts of invention, elocution, and the rest; nay,
more, as if it were all in all. But the reason is plain.
In human nature generally more of the fool than of
and therefore those faculties by which the foolish part
minds is taken are most potent. Wonderful like is
of boldness in civil business. What first? Boldness.

Would have been universally deemed fit for empire, if
never reigned.

Nero was the only emperor who was changed for the
his accession.

What second and third? Boldness. And yet boldness is a child of ignorance and baseness, far inferior to other parts. Nevertheless it doth fascinate and bind hand and foot those who are either shallow in judgment or weak in courage, which is the greatest part, yea, and prevaileth with wise men at times. Therefore we see it hath done wonders in popular actions, but with senates and princes less; and more ever upon the entrance of bold persons into action than soon after, for boldness is an ill keeper of promise. Surely as there are mountebanks for the natural body, so are there mountebanks for the politic body: men that undertake great cures, and perhaps have been lucky in two or three experiments, but want grounds of science, and therefore cannot hold out. Nay, we shall see a bold fellow many times do Mahomet's miracle. Mahomet made the people believe that he would call angels to him, and from the top of it offer up his prayers for the servers of his law. The people assembled. Mahomet ordered the hill to come to him again and again; and when they stood still he was never a whit abashed, but said, 'If the hill will not come to Mahomet, Mahomet will go to the hill.' These men, when they have promised great matters and do most shamefully, yet (if they have the perfection of boldness) they will but slight it over, and make a turn, and no more. Certainly, to men of great judgment, bold persons are a sight to behold; nay, and to the vulgar also, boldness hath something of the ridiculous. For if absurdity be the subject of laughter, doubt you not but great boldness is seldom without some absurdity. Especially it is a sport to see when a bold fellow is out of countenance, for that puts his face into a most shrunk and wooden posture, as needs it must: for in bashfulness spirits do a little go and come, but with bold men, upon occasion, they stand at a stay, like a stale at chess, where no mate, but yet the game cannot stir. But this last were fit for a satire than for a serious observation. This is well to be weighed—that boldness is ever blind, for it seeth not dangers and inconveniences; therefore it is ill in counsel, good in execution: so that the right use of bold persons is, that they be in command in chief, but be seconds, and under the direction of others. For in counsel it is good to see dangers, and in execution not to see them, except they be very great.

The following are the most notable passages of the Thirteenth, first published in 1612, and entitled, Goodness, and Goodness of Nature:—

need the angels to fall, the desire of knowledge in
man to fall; but in charity there is no excess,
angel or man come in danger by it. Errors,
this virtue of goodness or charity, may be committed.
I have an ungracious proverb, 'Tanto buon che val
lo good that he is good for nothing. And one of the
Italy Nicholas Macchiavel, had the confidence to put
almost in plain terms, 'That the Christian faith
up good men in prey to those that are tyrannical and
which he spake because indeed there was never law,
opinion, did so much magnify goodness as the
religion doth; therefore to avoid the scandal and the
in, it is good to take knowledge of the errors of a
cellent. Seek the good of other men, but be not in
their faces or fancies, for that is but facility or soft-
taketh an honest mind prisoner. Neither give thou
a gem, who would be better pleased and happier
barley-corn. The example of God teacheth the
: 'He sendeth his rain, and maketh his sun to
the just and the unjust;' but he doth not rain wealth
honour and virtues upon men equally. Common
to be communicated with all, but peculiar benefits

what aside from the line royal. A great and nobility addeth majesty to a monarch, but diminisheth and putteth life and spirit into the people, but presses fortune.

As for nobility in particular persons, it is a reverence to see an ancient castle or building not in decay, or a fair timber tree sound and perfect; how much more to an ancient noble family, which hath stood against time and weathers of time! For new nobility is but the act of time, but ancient nobility is the act of time. Those that are raised to nobility are commonly more virtuous but less content than their descendants, for there is rarely any rise by a commixture of good and evil arts. But it is remembrance of their virtues remain to their posterity, and faults die with themselves.

The Fifteenth Essay, 'Of Seditions and Troubles' was first published in 1625, and is of considerable length, but the following are perhaps the portions of it most worthy of note:—

Concerning the materials of seditions, it is a thing to be considered, for the surest way to prevent seditions (times do bear it) is to take away the matter of them: where there be fuel prepared, it is hard to tell whence the sparks come that shall set it on fire. The matter of seditions is of two kinds—much poverty and much discontentment. It is certain, so many overthrown estates, so many votes for the sword. Lucan noteth well the state of Rome before the civil war:

*'Hinc usura vorax, rapidumque in tempore sceleris
Hinc concussa fides, et multis utile bellum.'**

This same 'multis utile bellum' † is an assured and infallible sign of a state disposed to seditions and troubles. And where there is poverty and broken estate, in the better sort, be joined with want and necessity in the mean people, the danger is increased and great, for the rebellions of the belly are the worst. And where there is discontentment, they are in the politic body like to be in the natural, which are apt to gather a preternatural

* Hence gripping avarice, extortion, fraud,
Lubricating perjury had spread abroad,
Crushing the wretched people in their course,
And leaving civil war their last resource.

† War useful to the many.

to inflame. And let no prince measure the danger of
by this, whether they be just or unjust; for that were to
one people to be too reasonable, who do often spurn at
their own good, nor yet by this, whether the griefs whereupon
rise be in fact great or small, for they are the most dan-
gerous discontentments where the fear is greater than the
grief. * *Dolendi modus, timendi non item.* * Besides, in great
griefs is the same thing that provokes the patience do withal
the courage, but in fears it is not so. Neither let any
state be secure concerning discontentments because
they have been often or have been long, and yet no peril hath
escaped, for as it is true that every vapour or smoke doth not
bring a storm, so it is nevertheless true, that storms, though
they blow over divers times, yet may fall at last; and as the
proverb doth well, 'The cord breaketh at the last by
the weakest pull.'

The part of Epimetheus might well become Prometheus
in the case of discontentments, for there is not a better provision
against them. Epimetheus, when griefs and evils flew abroad,
did not see, he did not keep Hope in the bottom of the vessel,
but by the polite and artificial nourishing and entertaining
of hopes, and carrying men from hopes to hopes, is one of the best
defences against the poison of discontentments. And it is a
sign of a wise government and proceeding when it can
move hearts by hopes, when it cannot by satisfaction;
when it can handle things in such manner as no evil shall
be so peremptory, but that it hath some outlet of hope;
which is the less hard to do, because both particular persons
and states are apt enough to flatter themselves, or at least to
think that they believe not.

As to the foresight and prevention, that there be no likely
head wherunto discontented persons may resort, and
whom they may join, is a known but an excellent point
of caution. I understand a fit head to be one that hath great
reputation, that hath confidence with the discontented
part, upon whom they turn their eyes, and that is thought
to be in his own particular; which kind of persons
rather to be won and reconciled to the state, and that in a
private manner, or to be fronted with some other of the
party that may oppose them, and so divide the reputation.
Especially the dividing and breaking of all factions and com-
plices that are adverse to the state, and setting them at dis-

* *There are bounds to grief, but not to fear.*

tance, or at least distrust among themselves, is not the worst remedies. For it is a desperate case, if those with the proceeding of the state be full of discord and those that are against it be entire and united.

We will give nearly the whole of the Sixteenth entitled 'Of Atheism,' which is in the collection of 1612.

I had rather believe all the fables in the Legend, Talmud, and the Alcoran, than that this universe without a mind. And therefore God never wrought to convince atheism, because his ordinary works convince it. It is true that a little philosophy inclineth man's mind to atheism, but depth in philosophy bringeth men's minds to religion. For while the mind of man looketh upon causes scattered, it may sometimes rest in them and be content; but when it beholdeth the chain of them connected together, it must needs fly to Providence for support. Nay, even that school which is most accused of atheism, doth most demonstrate religion—that is the school of Leucippus, Democritus, and Epicurus. For it is a thousand times more credible that four mutable elements and one immutable essence, duly and eternally placed, need no God, than that an army of infinite small portions or seeds, unplaced, should produce this order and beauty without a Divine Mind. The Scripture saith, 'The fool hath said in his heart, there is no God.' It is not said, 'The fool hath thought in his heart;' so as he rather saith it by rote to himself, than would have, than that he can thoroughly believe it, or be persuaded of it; for none deny there is a God but those who think it maketh that there were no God. It appeareth furthermore that atheism is rather in the lip than in the heart; than by this, that atheists will ever be talking of that now, as if they faunted in it within themselves, and are glad to be strengthened by the consent of others; and you shall have atheists strive to get disciples, as it is done in other sects; and, which is most of all, you shall have those that will suffer for atheism, and not recant: wherefore should they truly think that there were no such thing as God, should they trouble themselves? Epicurus is charged

aporize, though in secret he thought there was no
 certainly he is traduced, for his words are noble
 * *Non Deos vulgi negare profanum, sed vulgi opi-*
applicare profanum. * Plato could have said no
 . . . They that deny a God destroy man's nobility;
 man is of kin to the beasts by his body; and if he
 is to God by his spirit, he is a base and ignoble
 destroys likewise magnanimity and the raising of
 it. For take an example of a dog, and mark what
 and courage he will put on when he finds himself
 by a man who, to him, is instead of a God, or *melior*
 ich courage is manifestly such as that creature,
 confidence of a better nature than his own, could
 . So man, when he resteth and assureth himself
 protection and favour, gathereth a force and faith
 nature in itself could not obtain. Therefore as
 all respects hateful, so in this, that it depriveth hu-
 of the means to exalt itself above human frailty.

teenth Essay, also in the collection of 1612,
 'Of Superstition.' Its leading idea is stated
 commencement :—

ther to have no opinion of God at all, than such an
 unworthy of him; for the one is unbelief, the other
 ; and certainly superstition is the reproach of the
 tarch saith well to that purpose: 'Surely,' saith
 ther a great deal men should say there was no such
 as Plutarch, than that they should say that there
 tarch that would eat his children as soon as they
 as the poets speak of Saturn. And as the con-
 ter towards God, so the danger is greater towards
 m leaves a man to sense, to philosophy, to natural
 , to reputation; all which may be guides to an
 al virtue, though religion were not; but supersti-
 its all these, and erecteth an absolute monarchy in
 men.

Eighteenth, entitled 'Of Travel,' first pub-
 25, it may be enough to give the concluding

*reasons to deny the deities of the vulgar, but it is
 by the opinions of the vulgar to the divinities.*

When a traveller returneth home, let him not leave countries where he hath travelled altogether behind him, maintain a correspondence by letters with those of his acquaintance which are of most worth. And let his travel appear in his discourse than in his apparel or gesture; and in his discourse let him be rather advised in his answers than forward to tell stories. And let it appear that he doth not change country manners for those of foreign parts, but only pick some flowers of that he hath learned abroad into the custom of his own country.

The Nineteenth 'Of Empire,' which is in the collection of 1612, sets out thus:—

It is a miserable state of mind to have few things to desire and many things to fear, and yet that commonly is the case of kings, who, being at the highest, want matter of desire, which makes their minds more languishing and have many representations of perils and shadows, which make their minds less clear. And this is one reason also of that effect which Scripture speaketh of—'That the king's heart is inscrutable for multitude of jealousies, and lack of some predominant desire that should marshal and put in order all the rest, makes any man's heart hard to find or sound. Hence it cometh to pass that princes many times make themselves desires, and their hearts upon toys—sometimes upon a building, sometimes upon erecting of an order, sometimes upon the advancing of a person, sometimes upon obtaining excellency in some art or of the hand—as Nero for playing on the harp, Domitian for certainty of the hand with the arrow, Commodus for play at sence, Caracalla for driving chariots, and the like seemeth incredible unto those that know not the principle. 'That the mind of man is more cheered and refreshed by sitting in small things than by standing at a stay in great. See also that kings that have been fortunate conquerors in their first years (it being not possible for them to go forward infinitely, but that they must have some check or arrest in their fortunes) turn in their latter years to be superstitious and melancholy—as did Alexander the Great, Dioclesian, and, in memory, Charles the Fifth, and others; for he that is used to go forward, and findeth a stop, falleth out of his own favour and is not the thing he was.

From the Twentieth Essay, 'Of Councils,' &c.

is vain for princes to take counsel concerning matters, and no counsel likewise concerning persons; for all are as dead images, and the life of the execution of both in the good choice of persons. In choice of persons for ripening business for the council, it is better to choose indifferent persons than to make an indifferency by choosing those that are strong on both sides. I commend, standing commissions—as for trade, for treasure, for war, for some provinces; for where there be divers particular councils, and but one council of estate (as it is in Spain), in effect no more than standing commissions, save that of greater authority. Let such as are to inform council of their particular professions (as lawyers, seamen, and the like), be first heard before committees, and on occasion serve, before the council. And let them not come in by multitudes or in a tumultuous manner, for that is to inform councils, not to inform them. A long table, and a high, or seats about the walls, seem things of form, but of no substance; for at a long table, a few at the upper end sway all the business, but in the other form there is no regard to the counsellors' opinions that sit lower. A king, presides in council, let him beware how he opens his mouth too much in that which he propoundeth, for counsellors will but take the wind of him, and, instead of giving counsel, will sing him a song of 'Placebo.' *

Twenty-first, entitled 'Of Delays,' first published 1625, is very short: it concludes thus:—

It is good to commit the beginnings of all great business to Argus with his hundred eyes, and the ends to Briareus with his hundred hands—first to watch and then to speed. The helmet of Pluto, which maketh the politic man go into secrecy in the council, and celerity in the execution—when things are once come to the execution, there is no comparison to celerity—like the motion of a bullet, which flieth so swift as it outruns the eye.

Twenty-second, 'Of Cunning,' published in 1625, is as follows:—

Be cunning for a sinister or crooked wisdom. And

* *I will make myself agreeable.*

certainly there is great difference between a cunning and a wise man, not only in point of honesty but in probability. There be that can pack the cards, and yet can play well; so there are some that are good in canvasses and negotiations that are otherwise weak men. Again, it is one thing to understand persons, and another thing to understand reason; for many are perfect in men's humours that are not capable of the real part of business, which is the constitution of one that hath studied men more than books. Such men are fitter for practice than for counsel, and they are good in their own alley; turn them to new men and they lose their aim.

The Twenty-third, also published in 1612, is entitled 'Of Wisdom for a Man's Self,' and is thus wound up:

Wisdom for a man's self is, in many branches thereof, a depraved thing: it is the wisdom of rats, that will be gone and leave a house somewhat before it fall; it is the wisdom of the fox, that thrusts out the badger who digged and made room for him; it is the wisdom of crocodiles, that shed tears when they would devour. But that which is specially to be noticed is, that those which (as Cicero says of Pompey) are '*Sui amici sine rivali*,'* are many times unfortunate; and whereas they have all their time sacrificed to themselves, they become in the end themselves sacrifices to the inconstancy of fortune, whose victims they thought by their self-wisdom to have pinioned.

The Twenty-fourth Essay, entitled 'Of Innovations,' and first published in 1625, we give entire:—

As the births of living creatures at first are all strange, so are all innovations, which are the births of time. Yet notwithstanding, as those that first bring honour into their families are commonly more worthy than most that succeed, so the first precedent (if it be good) is seldom attained by imitation. It is so to man's nature, as it stands perverted, hath a natural resistance strongest in continuance; but good, as a forced resistance, is strongest at first. Surely every medicine is an innovation; he that will not apply new remedies must expect new evils; it is the greatest innovator. And if time, of course, turn things to the worse, and wisdom and counsel shall not

* Lovers of themselves without a rival.

What shall be the end? It is true, that what is old, though it be not good, yet at least it is fit. Things which have long gone together are as it were flesh themselves, whereas new things piece not so well though they help by their utility, yet they trouble continuity. Besides, they are like strangers, more easily favoured. All this is true, if time stood still; but time moveth so round that a forward retention of what is old is a thing as an innovation, and they that much old times are but a scorn to the new. It is therefore, that men in their innovations would follow time itself, which, indeed, innovateth greatly, but by degrees, scarce to be perceived; for otherwise, new is unlooked for, and ever it mends some and hurts some; and he that is helped, takes it for a fortune, and he that is hurt, for a wrong, and imputeth blame. It is good also not to try experiments in states, unless necessity be urgent, or the utility evident; and that it be the reformation that draweth on the most the desire of change that pretendeth the reformation lastly, that the novelty, though it be not to be held for a suspect; and as the Scripture saith, let us stand upon the ancient way, and then look to discover what is the straight and right way, and do it.

The first and last paragraphs of the 12th, entitled "Of Despatch," which is in the 12th :—

Despatch is one of the most dangerous things to be used. It is like that which the physicians call pre-digestion, which is sure to fill the body full of secret seeds of diseases: therefore measure not the time of sitting, but by the advancement of the road as in races it is not the large stride or high lift of speed, so in business the keeping close to the mark taking of it too much at once procureth destruction to the care of some, only to come off speedily for others to contrive some false periods of business, because men are men of despatch. But it is one thing to abbreviate, another by cutting off; and business so several sittings or meetings goeth commonly backward in an unsteady manner. I knew a wise man

that had it for a by-word, when he saw men hasten to a conclusion, 'Stay a little that we may make an end the sooner.'

Above all things, order, and distribution, and singleness of parts, is the life of despatch, so as the distribution be subtle; for he that doth not divide will never enter into business, and he that divideth too much will never come off it clearly. To choose time is to save time, and an idle motion is but beating the air. There be three businesses—the preparation, the debate or examination, perfection; whereof, if you look for despatch, let the only be the work of many, and the first and last the few. The proceeding upon somewhat conceived in doth for the most part facilitate despatch; for though it be wholly rejected, yet that negative is more precise direction than an indefinite, as ashes are more general dust.

Here is the greater part of the Twenty-sixth, "Of Seeming Wise," also published in 1612:—

It hath been an opinion that the French are wiser than they seem, and the Spaniards seem wiser than they are. However it be between nations, certainly it is so between men. For as the apostle saith of godliness, 'Having a godliness, but denying the power thereof;' so certainly in points of wisdom and sufficiency that do nothing or little solemnly—*Magis conatus nugas*.* It is a ridiculous and fit for a satire to persons of judgment, to see what these formalists have, and what prospectives to make sure to seem body that hath depth and bulk. Some are so reserved as they will not show their wares but by a dark and seen always to keep back somewhat; and when they within themselves they speak of that they do not well would nevertheless seem to others to know of that which they may not well speak. Some help themselves with countenance and gestures, and are wise by signs, as Cicero saith of that when he answered him, he fetched one of his brows to his forehead, and bent the other down to his chin. 'Re altero ad frontem sublato, altero ad mentum depresso cilio, crudelitatem tibi non placere.'† Some think to

* Trifles with great parade.

† You answer with one brow raised to your forehead, the other depressed to your chin, that cruelty is not pleasing.

ing a great word and being peremptory, and go on, by admittance that which they cannot make good. Whoever is beyond their reach will seem to despise or of it, as impertinent or curious, and so would have chance seem judgment. Seeming wise men shift to get opinion, but let no man choose them for it, for certainly you were better take for business a what absurd than over formal.

Twenty-seventh, "Of Friendship," likewise in edition of 1612, is long; but the following passages most notable, or those that best admit of being taken from the context:—

So men perceive what solitude is, and how far it exceeds a crowd is not company, and faces are but a galleys, and talk but a tinkling cymbal, where there is

Strange thing to observe how high a rate great kings will do set upon this fruit of friendship whereof we great as they purchase it many times at the hazard of their own safety and greatness. For princes, in regard of their fortune from that of their subjects and cannot gather this fruit, except (to make themselves bereof) they raise some persons to be as it were command almost equal to themselves, which many times inconvenience.

As raised Agrippa (though of mean birth) to that when he consulted with Mæcenas about the marriage daughter Julia, Mæcenas took the liberty to tell at he must either marry his daughter to Agrippa, or his life, there was no third way, he had made him

With Tiberius Cæsar, Sejanus had ascended to that they two were termed and reckoned as a pair of Tiberius, in a letter to him, saith, 'Hæc pro amicitia occultavi;*' and the whole senate dedicated an altar ship, as to a goddess, in respect of the great dearnesship between them two. The like or more was between Severus and Plantianus, for he forced his eldest son the daughter of Plautianus, and would maintain

account of our friendship I have not concealed these

Plautianus in doing affronts to his son: and did write a letter to the senate by these words—‘I love the man so well I wish he may over-live me.’ Now if these princes had as a Trojan or a Marcus Aurelius, a man might have thought that this had proceeded of an abundant goodness of nature: being men so wise, of such strength and severity of mind, so extreme lovers of themselves, as all these were, it is most plainly that they found their own felicity (though it is as ever happened to mortal men) but as a half-piece, they might have a friend to make it entire; and yet, what more, they were princes that had wives, sons, nephews; yet all these could not supply the comfort of friendship.

The parable of Pythagoras is dark, but true—‘Cor ne (Eat out the heart).’ Certainly if a man would give it a phrase, those that want friends to open themselves are cannibals of their own hearts. But one thing is most admirable (wherewith I will conclude this first-fruit of friendship), is, that this communicating of a man’s self to his friend hath two contrary effects, for it redoubleth joys and cutteth griefs in halves, for there is no man that imparteth his joys to his friend, but he joyeth the more; and no man that imparteth his griefs to his friend, but he grieveth the less. So that it is in this operation upon a man’s mind of like virtue as the alchemists use to attribute to their stone for man’s body, that it worketh all contrary effects, but still to the good and benefit of man.

The second-fruit of friendship is healthful and sovereign to the understanding, as the first is for the affections; for friendship maketh indeed a fair day in the affections from stormy tempests, but it maketh daylight in the understanding from darkness and confusion of thoughts. Neither is this to be understood only of faithful counsel which a man receiveth of his friend; but before you come to that, certain it is that whosoever hath his mind fraught with many thoughts, his wit and understanding do clarify and break up in the communicating and discoursing with another. he tosseth his thoughts, he marshaleth them more orderly, he seeth how they look when they are turned into words: finally, he waxeth wiser than himself, and that more by an hour’s discourse than by a day’s meditation. It was well said by Themistocles to the king of Persia, ‘That speech was like cloth of Arras opened abroad, whereby the imagery doth appear in figure, whereas *thoughts* they be but as in packs.’ Neither is this a second-fruit of friendship, in opening the understanding, rec-

only to such friends as are able to give a man counsel (they indeed are best); but even without that a man learneth of himself, and bringeth his own thoughts to light, and whetteth his wits as against a stone, which itself cuts not. In a word, a man were better relate himself to a statue or picture than to suffer his thoughts to pass in smother.

Heraclitus saith well in one of his *Ænigmas*, 'Dry light is ever the best:' and certain it is, that the light that a man receiveth by counsel from another is drier and purer than that which cometh from his own understanding and judgment, which is ever infused and drenched in his affections and customs. So as there is as much difference between the counsel that a friend giveth and that a man giveth himself, as there is between the counsel of a friend and of a flatterer; for there is no such flatterer as in a man's self, and there is no such remedy against flattery of a man's self as the liberty of a friend. . . .

The Twenty-eighth Essay, entitled "Of Expense," which is very short, is the first we have come to of the Ten original Essays published in 1597. It contains, among others, these two practical directions:—

Certainly, if a man will keep but of even-hand, his ordinary expenses ought to be but to the half of his receipts; and if he think to wax rich, but to the third part. A man ought warily to begin charges, which, once begun, will continue; but in matters that return not, he may be more magnificent.

The Twenty-ninth Essay is entitled "Of the True Greatness of Kingdoms and Estates," and appeared in part in the edition of 1612. It is long, and very masterly and characteristic. We will transcribe the most remarkable passages:—

Walled towns, stored arsenals and armories, goodly races of horse, chariots of war, elephants, ordnance, artillery, and the like—all this is but a sheep in a lion's skin, except the breed and disposition of the people be stout and warlike. Nay, number itself in armies importeth not much, where the people is of weak courage; for, as Virgil saith, 'It never troubles a wolf how many the sheep be.' The army of the Persians, in the plains of Arbela, was such a vast sea of people, as it did somewhat astonish the commanders in Alexander's army; who came to him, therefore, and wished him to set upon them by night

but he answered, 'He would not pilfer the victory;' and defeat was easy. When Tigranes, the Armenian, being encamped upon a hill with four hundred thousand men, discovered an army of the Romans, being not above fourteen thousand, march towards him, he made himself merry with it, and said, 'Ye men are too many for an ambassage, and too few for a fight; before the sun set he found them enough to give him the day with infinite slaughter. Many are the examples of the great difference between number and courage, so that a man may truly make judgment, that the principal point of greatness in any state is to have a race of military men. Neither is money the sinews of war, as it is trivially said, where the sinews of men's arms are base and effeminate people are failing. For Solon said when Croesus (when in ostentation he showed him his gold), 'Should any other come that hath better iron than you, he will be master of all this gold.' Therefore let any prince or state think solely of his forces, except his militia of natives be of good and valiant soldiers, and let princes on the other side, if they have subjects of martial disposition, know their own strength, unless they be otherwise wanting unto themselves. As for mercenary forces, which is the help in this case, all examples show that whatsoever estate or prince doth rest upon them, 'He may spread his feathers for a time, but he will mow soon after'

By all means it is to be procured, that the trunk of Nebuchadnezzar's tree of monarchy be great enough to bear the branches and the boughs—that is, that the natural subjects of the crown or state bear a sufficient proportion to the strangers and subjects that they govern. Therefore all states that are liberal of naturalization towards strangers are fit for empire; for to think that an handful of people can, with the greatest courage and policy in the world, embrace too large extent of dominion, it may hold for a time, but it will fail suddenly. The Spartans were a nice people in point of naturalization, whereby, as long as they kept their compass, they stood firm, but when they spread, and their boughs were become too great for their trunk, they became a windfall upon the sudden. Never any state was in this point so open to receive strangers into their body as were the Romans, therefore it sorted with them accordingly, they grew to the greatest monarchy. Their manner was to grant naturalization (which they called *jus civitatis*) and to grant it in the highest degree, that is, not only *jus commercii*

* Right of trade.

ius,* *jus hereditatis*,† but also *jus suffragi*‡ and *jus* § and thus, not to singular persons alone, but likewise families, yea, to cities and sometimes to nations. Add the custom of plantation of colonies, whereby the Roman was removed into the soil of other nations; and, both constitutions together, you will say, that it was Romans that spread upon the world, but it was the world that spread upon the Romans; and that was the sure way to it. I have marvelled sometimes at Spain, how they do contain so large dominions with so few natural Spaniards; but sure the whole compass of Spain is a very great tree, far above Rome and Sparta at the first; and though they have not had that usage to naturalize, yet they have that which is next to it; that is to almost indifferently, all nations in their militia of soldiers, yea, and sometimes in their highest commands. Somewhat at this instant, they are sensible of this want, as by the ‘Pragmatical Sanction,’ now published, is seen.

No body can be healthful without exercise, neither natural nor politic; and certainly to a kingdom or estate, a just and durable war is the true exercise. A civil war, indeed, is the heat of a fever; but a foreign war is like the heat of the sun, and serveth to keep the body in health: for in a slothful and idle state, both courages will effeminate and manners corrupt, whosoever it be for happiness, without all question for it maketh to be still, for the most part, in arms; and the strength of a veteran army (though it be a chargeable business always on foot, is that which commonly giveth the law, and the reputation, amongst all neighbour-states; as may be seen in Spain, which hath had, in one part or other, an army almost continually now by the space of six-score years.

Whoever is master of the sea is an abridgment of a monarchy. Writing to Atticus of Pompey’s preparation against the pirates, he saith—‘*Consilium Pompeii planè Themistocleum est, in qui mari potitur eum rerum potiri.*’|| And without

right of marriage.

† Right of inheritance.

right of suffrage.

§ Right of honours.

Pompey’s plan is clearly that of Themistocles, for he believeth that whoever is master of the sea will possess the empire.

doubt Pompey had tired out Cæsar if upon vain counsels had not left that way. We see the great effects of battles. The battle of Actium decided the empire of the world. The battle of Lepanto arrested the greatness of the Turk. There are many examples where sea-fights have been final to the world; this is when princes or states have set up their rest upon the sea. But thus much is certain, that he that commands the sea is at great liberty, and may take as much and as long of the war as he will; whereas those that be strongest by land are many times nevertheless in great straits. Surely at this time of ours in Europe, the advantage of strength at sea is one of the principal dowries of this kingdom of Great Britain; both because most of the kingdoms of Europe are merely inland, but girt by the sea, most part of their commerce and because the wealth of both Indies seems in great measure an accessory to the command of the seas.

The wars of latter ages seem to be made in the respect of the glory and honour which reflected upon the wars in ancient time. There be now for martial reurement some degrees and orders of chivalry, which are less are conferred promiscuously upon soldiers and nobles, and some remembrance, perhaps, upon the scutcheons, some hospitals for maimed soldiers, and such like things as in ancient times, the trophies erected upon the place of victory; the funeral laudatives and monuments for those that die in the wars; the crowns and garlands personal, the emperor, which the great king of the world allowed, the triumphs of the generals upon their return, great donatives and largesses upon the disbanding of armies—were things able to inflame all men's courage; above all, that of the triumph amongst the Romans, pageants or gaudery, but one of the wisest and noblest institutions that ever was; for it contained three things—honour to the general, riches to the treasury out of the spoils, and due to the army. But that honour perhaps were not fit for monarchs, except it be in the person of the monarch himself or his sons; as it came to pass in the times of the Romans, who did appropriate the actual triumphs to themselves, their sons for such wars as they did achieve in person, only for wars achieved by subjects some triumphal chariots and ensigns to the general.

The Thirtieth Essay, "Of Regiment (that is

'management) of Health," is another of those published 1597. It is very short, and it will be sufficient to the opening sentences:—

It is a wisdom in this beyond the rules of physic: a man observe what he finds good of and what he finds ill, that is the best physic to preserve health. But it is a safer rule to say, This agreeth not well with me, therefore I will not continue it—than this, I find no offence of this, therefore I may use it. For strength of nature in youth passeth by excesses which are owing a man till his age.

Thirty-first, entitled "Of Suspicion," was new to the edition of 1597. It is also very short; and the following few sentences may be sample enough of it:—

Nothing makes a man suspect much more than to know little, and therefore men should remedy suspicion by knowing more, and not to keep their suspicions in their own hands.

What would men have? Do they think those they deal with are saints? Do they not think they will be true to their own ends, and be truer to themselves than to them? Or is there no better way to moderate suspicions than to suppose them as true, and yet to bridle them?

For so far a man ought to make use of suspicions as to be as, if that should be true that he suspects, yet it him no hurt.

Thirty-second, "Of Discourse," is another of those new to the edition of 1597. Here are two or three sentences

The most memorable part of talk is to give the occasion, and to moderate and pass to somewhat else; for then a man may dance. It is good in discourse and speech of controversy to vary and intermingle speech of the present occasion with arguments, tales with reasons, asking of questions with giving of opinions, and jest with earnest; for it is a dull thing to hold, as we say now, to jade any thing too far.
And continued speech, without a good speech of inter-
shows slowness; and a good reply, or second speech,
a good settled speech, sheweth shallowness or weakness;

as we see in beasts, that those that are weakest in the chase are yet nimblest in the turn, as it is betwixt the greyhound and the hare. To use too many circumstances ere one come to the matter, is wearisome; to use none all, is blunt.

From the Thirty-third Essay, entitled "Of Plantations," which was first published in 1625, we extract the commencing and concluding remarks, as of more general or enduring applicability.—

Plantations are amongst ancient, primitive, and heroic works. When the world was young it begat more children, but now it is old it begets fewer, for I may justly account new plantations to be the children of former kingdoms. . . . It is the saddest thing in the world to forsake or destitute a plantation once in forwardness; for besides the dishonour, the guiltiness of blood of many miserable persons.

The Thirty-fourth Essay, "Of Riches," first appeared in the collection of 1612. Its spirit and general tenor may be gathered from the following extracts.—

Of great riches there is no real use, except it be in the distribution, the rest is but content, so saith Solomon, 'Where is the abundance, there are many to consume it, and what hath the owner the sight of it with his eyes?' The personal fruition of any man cannot reach to feel great riches: there is a custody of them, a power of dole and donative of them, or a fame of them, and no solid use to the owner. Do you not see what feigned pleasures are set upon little stores and rarities? And what works of ostentation are undertaken, because there might seem to be a use of great riches? But then you will say they may be used to buy men out of dangers or troubles; as Solomon saith, 'Riches are as a stronghold in the imagination of the man.' But this is excellently expressed, that it is in imagination, and not always in fact; for certainly great riches have sold more men than they have bought out. . . . The temptations to envy are many, and most of them foul. Parsimony is of the best, and yet is not innocent, for it withholdeth men from works of liberality and charity. . . . It was truly observed of one, that himself came very hardly to a little riches, and was easily to great riches: for when a man's stock is come to that he can expect the prime of markets, and overcome the bargains, which, for their greatness, are few men's money;

master in the industries of younger men, he cannot but increase mainly. He that resteth upon gains certain shall not grow to great riches, and he that puts all upon adventures doth oftentimes break and come to poverty; it is good, therefore, to guard adventures with certainties that may uphold them. Believe not much them that seem to despise riches; for they despise them that despair of them, and none is when they come to them. Be not penny-wise: riches are wings, and sometimes they fly away of themselves; sometimes they must be set flying to bring in more. A great feast left to an heir is as a lure to all the birds of prey round about to seize on him, if he be not the better established in reason and judgment. Likewise glorious gifts and foundations like molasses without salt, and but the painted sepulchres of things which soon will putrify and corrupt inwardly: therefore measure not thine advancements by quantity, but frame them by measure, and defer not charities till death; for certainly, if a man weigh it rightly, he that doth so is rather good of another man's than of his own.

The Thirty-fifth Essay is entitled "Of Prophecies," and was first published in 1625. It is omitted in the Latin translation of the Essays, perhaps from the impossibility of giving the effect of the popular rhymes to which great part of it relates in that language, and the peculiarly English interest of the principal matters discussed or noticed. The following are extracts:—

When I was in France, I heard from one Doctor Pena that a queen-mother, who was given to curious arts, caused the day of her husband's nativity to be calculated under a false name; and the astrologer gave a judgment that he should be killed in a duel, at which the queen laughed, thinking her husband to be above challenges and duels; but he was slain upon a sudden at tilt, the splinters of the staff of Montgomery going into his beaver. The trivial prophecy that I heard when I was a child, and Queen Elizabeth was in the flower of her years, was—

'When hempe is spun,
England's done:'

and by it was generally conceived, that after the princes had died which had the principal letters of that word 'hempe' (which were Henry, Edward, Mary, Philip, and Elizabeth), England should come to utter confusion; which, thanks be to God, is verified only in the change of the name; for that the king's

style is now no more of England, but of Britain. for Cleon's dream, I think it was a jest: it was, that he was devoured of a long dragon, and it was expounded of a multitude of sausages that troubled him exceedingly. There are many of the like kind, especially if you include dreams and predictions of astrology. But I have set down these few only to gain credit for example. My judgment is, that they ought to be despised, and ought to serve but for winter-talk by the fireside: though when I say despised, I mean it as for belief; otherwise the spreading or publishing of them is in no way to be despised, for they have done much mischief. And many severe laws made to suppress them. That that hath taken them grace and some credit consisteth in three things: that men mark when they hit, and never mark when they miss, as they do generally also of dreams. The second is, that probable conjectures or obscure traditions many times turn themselves into prophecies, while the nature of man, which craves divination, thinks it no peril to foretell that which indeed doth but collect. The third and last (which is the worst one) is, that almost all of them, being infinite in number, have been impostures, and by idle and crafty brains merely contrived and feigned after the event past.

The following few sentences are from the Thirty-seventh Essay, entitled "Of Ambition," which is in the edition of 1612:—

Ambition is like choler, which is a humour that makes men active, earnest, full of alacrity, and stirring, if it be not stopped, but if it be stopped, and cannot have its way, it turneth a dast, and thereby malign and venomous. So ambitious men, if they find the way open for their rising, and get forward, they are rather busy than dangerous; but if they be checked in their desires they become secretly discontented, look upon men and matters with an evil eye, and are displeased when things go backward, which is the worst passion in a servant of a prince or state. It is counted some a weakness in princes to have favourites, but it is in others the best remedy against ambitious great ones; for the way of pleasuring and displeasuring lieth by the favour, it is impossible any other should be over-great.

We subjoin the whole of the Thirty-seventh, entitled "Of Masques and Triumphs," which was first published in 1625:—

ing in song, especially in dialogues, hath an ex-
grace. I say acting, not dancing for that is a
vulgar thing, and the voices of the dialogue would
be mainly (a bass and a tenor, no treble, and the
one tragical, not nice or dainty. Several quires
over against another, and taking the voice by
turn-wise, give great pleasure. Turning dances
are a childish curiosity, and generally let it be noted,
songs which I here set down are such as do naturally
come, and not respect petty wonderments. It is true,
most of scenes, so it be quietly and without noise, are
not beauty and pleasure; for they feed and relieve
the eye to be full of the same object. Let the scenes
be bright, especially coloured and varied; and let the
any other that are to come down from the scene,
motions upon the scene itself before their coming
draws the eye strangely, and makes it with great
desire to see that it cannot perfectly discern. Let the
be bright and cheerful, and not clippings or pulings. Let
be likewise be sharp and loud, and well placed.
Things that show best by candle-light are white, carna-
kind of sea-water green, and reds or spangs, as they
great coat, so they are of most glory. As for rich
it is lost and not discerned. Let the suits of the
be graceful, and such as become the person when the

For jousts, and tourneys, and barriers, the glories of are chiefly in the chariots wherein the challengers make entry, especially if they be drawn with strange beasts, as bears, camels, and the like; or in the devices of their entry, or in bravery of their liveries, or in the goodly furniture of horses and armour. But enough of those toys.

This, as well as the Thirty-fifth, is omitted in Latin translation.

The Thirty-eighth, which appeared in 1612, is entitled "Of Nature in Men." Here are some of its aphorisms and counsels:—

Nature is often hidden, sometimes overcome, seldom tinged. Force maketh nature more violent in the re- doctrine and discourse maketh nature less importune; custom only doth alter and subdue nature. He that seeketh victory over his nature, let him not set himself too great too small tasks, for the first will make him dejected by failing, and the second will make him a small piece though by often prevailing. And at the first let him practise with helps, as swimmers do with bladders or rushes, but at a time let him practise with disadvantages, as dancers do with thick shoes; for it breeds great perfection, if the practice be harder than the use. Let not a man force a habit on himself with a perpetual continuance, but with some intermission; for both the pause re-enforceth the new onset; and a man that is not perfect be ever in practice, he shall as he practiseth his errors as his abilities, and induce the habit of both, and there is no means to help this but by seasonable intermission. In studies, whatsoever a man commandeth himself, let him set hours for it; but whatsoever is agreeable to his nature, let him take no care for any set times, for thoughts will fly to it of themselves so as the spaces of other business or studies will suffice. A man's nature runs either to herbs or weeds, therefore let him seasonably water the one and destroy the other.

The Thirty-ninth, also in the collection of 1612, is from its subject, "Of Custom and Education," a natural sequel to the preceding. The substance of it is contained in the following passages. —

Mens thoughts are much according to their inclinations; *their discourse* and speeches according to their learning.

unions; but their deeds are after as they have been said: and therefore, as Machiavel well noteth (though favoured instance), 'there is no trusting to the force of words to the bravery of words, except it be corroborate by

His instance is, that for the achieving of a desperate purpose, a man should not rest upon the fierceness of any nature, or his resolute undertakings; but take such a man that had his hands formerly in blood. In other places the predominancy of custom is everywhere visible, as a man would wonder to hear men profess, protest, and give great words, and then do just as they have done as if they were dead images, and engines moved only by the seals of custom. We see also the reign or tyranny of custom what it is. The Indians (I mean the sect of their wise men) lay themselves quietly upon a stack of wood, and so burn themselves by fire. Nay, the wives strive to be burned with the corpses of their husbands. The lads of Sparta of late time, were wont to be scourged upon the altar of Diana as much as queching.* I remember in the beginning of

is the true word, as we find it in Bacon's own edition (the first in which the passage appears), and also in the edition, of 1632. Mr. Montagu prints "squeaking," a modern corruption. By "queching," however, probably meant uttering a cry of pain, not merely shrieking, as the lexicographers interpret the word. Bacon has the Latin version, executed, if not by himself, at least under his own inspection, *vix ejulatu aut gemitu ullo* but the passage in Cicero (*Tuscul. Disp. II. 13*), which Bacon evidently had in his recollection, runs *quorum nemo exclamavit umquam, sed ne ingemuit quidem*. This is considered by the lexicographers as the same word as *quick*, which we have in Spenser (*F. Q. v. 9. 33*) "That could not move nor quick at all;" and as being the verb corresponding to the adjective *queachy*, which is used by Drayton to fens and sands, and seems to have nearly the meaning of *quaggy*. It is probably merely another form of the word *quick*, and may therefore signify properly no more than give sign of life or feeling. To *quake* is perhaps an imitation, and may have meant originally to indicate a shudder, or sensation, by voice as well as by movement. Wake another form, and *squeak* and *quack* may be others. Dr.

Queen Elizabeth's time of England, an Irish rebel put up a petition to the deputy that he might be hanged by wyth, and not in a halter, because it had been used by former rebels. There be monks in Russia, for penance will sit a whole night in a vessel of water, till they are gaged with hard ice. But if the force of custom be single and separate, be great, the force of custom copulated, joined, and collegiate, is far greater. For then it teacheth, company comforteth, emulation quickeneth, raiseth; so as in such places the force of custom is imitation. Certainly the great multiplication of the human nature, resteth upon societies well ordained and disciplined: for commonwealths and good governments do breed virtue grown, but do not much mend the seeds. The greatest misery is, that the most effectual means are now appointed least to be desired.

The Fortieth, entitled "Of Fortune," is among those published in 1612. We will give the general of it:—

The way of fortune is like the milken way in the sky: it is a meeting or knot of a number of small stars: not a cluster, but giving light together; so are there a number of small and scarce discerned virtues, or rather faculties and qualities that make men fortunate. The Italians note some such as a man would little think: when they speak of a man that cannot do amiss, they will throw in into his other qualities that he hath poco di matto. And certainly there be more fortunate properties, than to have a little of the good, and not too much of the honest. Therefore extreme love of country, or masters, were never fortunate, neither can. For when a man placeth his thoughts without himself, he liveth not his own way. . . . Fortune is to be honoured and respected, and it be but for her daughters, confidence and flattery: for those two felicity breedeth, the first with

Johnson, in his Dictionary, instead of *quech*, gives Bacon's word here; quoting the passage in a single inverted shape in all respects:—"The lads of Sparta were wonted to be whipped, without so much as *queching*." The interpretation, however, may be just enough:—"To show pain; perhaps to complain."

in others towards him. All wise men to decline their own virtues, use to ascribe them to Providence; for so they may the better assume them: and greatness in a man to be the care of the higher powers. And to the pilot in the tempest, 'Cæsareum portas, et tuas.'* So Sylla chose the name of Felix, and not of

And it hath been noted, that those who ascribe much to their own wisdom and policy end unjustly. It is written, that Timotheus the Athenian, after he gave account he gave to the state of his government, closed his speech, 'and in this fortune had no part,' quired in anything he undertook afterwards. Consider he, whose fortunes are like Homer's verses, that he and easiness more than the verses of other poets; as with of Timoleon's fortune, in respect of that of Agamemnonidas: and that this should be, no doubt it is a man's self.

Forty-first, entitled "Of Usury," first appeared in the edition of 1625. By usury Bacon means simply interest for money; and, with all his penetration, at before his age in his views upon this and other parts of commerce and political economy, as may be seen from the present essay, and more fully from his essay of Henry the Seventh. He was too sagacious, not to contend that the taking of interest for money was altogether dispensed with or put down; and accordingly, after having here pointed out what he calls the commodities of usury," he proceeds:—

On the other side, the commodities of usury are: first, never usury in some respect hindereth merchandizing, nor other it advanceth it: for it is certain, that the art of trade is driven by young merchants, upon borrowed interest: so as if the usurer either call in, or keep money, there will ensue presently a great stand of trade. The second is, that were it not for this easy borrowing of money, men's necessities would draw upon them a most undoing, in that they would be forced to sell their lands or goods far under foot; and so, whereas

* Thou bearest Cæsar, and his fortune too.

usury doth but gnaw upon them, bad markets would swallow them quite up. As for mortgaging or pawning, it will mend the matter; for either men will not take pawns without use, or if they do, they will look precisely for the forfeit. I remember a cruel monied man in the country that would say, 'The devil take this usury, it keeps us from forfeitures of gages and bonds.' The third and last is, that it is a vain conceit, that there would be ordinary borrowing without fit; and it is impossible to conceive the number of inconveniences that will ensue, if borrowing be cramped: then to speak of the abolishing of usury is idle. All states ever had it in one kind, or rate or other; so as that of usury must be sent to Utopia. . . .

The Forty-second Essay, "Of Youth and Age," is one of those published in 1612, must be nearly in full: -

A man that is young in years, may be old in hours, have lost no time, but that happeneth rarely. Generally youth is like the first cogitations, not so wise as the second; for youth is a youth in thoughts as well as in ages: and yet the mind of young men is more lively than that of old, and imagination streameth into their minds better, and, as it were, more direct. Natures that have much heat, and great and violent emotions, and perturbations, are not ripe for action till they have passed the meridian of their years; as it was with Julius Cæsar, and Septimius Severus, of the latter of whom it is said, '*Juvenis egit erroribus, imo furoribus plenam*;'* and yet he was the ablest emperor almost of all the list. But reposed natures do well in youth, as it is seen in Augustus Cæsar, Cosimo Duke of Florence, Gaston de Foix, and others. On the other side, heat and vivacity in age is an excellent composition for business. Young men are fitter to invent than to judge, fitter for execution than for counsel, and fitter for new projects than for settled business. For the experience of age in things that fall within the compass of it, directeth them, but in new things abuseth them. The errors of young men are the ruin of but few things, but the errors of aged men amount but to this, that more things have been done or sooner. Young men in the conduct and manage of actions embrace more than they can hold, strive to do more than they can quiet, fly to the end without consideration.

* *He spent his youth not merely in errors, but in madness.*

and degrees, pursue some few principles which they need upon absurdly, care not to innovate, which known inconveniences; use extreme remedies at that which doubleth all errors, will not acknowledge them, like an unready horse, that will neither stop. Men of age object too much, consult too long, advise little, repent too soon, and seldom drive business the full period, but content themselves with a mediocrity. Certainly it is good to compound employments; for that will be good for the present, because one of either age may correct the defects of both, and succession, that young men may be learners, while old are actors; and lastly, good for external accidents, authority followeth old men, and favour and popularity. But for the moral part perhaps youth will have preeminence, as age hath for the politic. A certain Rabbi in the text, 'Your young men shall see visions, and old men shall dream dreams,' inferreth, that young men are nearer to God than old, because vision is a clearer thing than a dream. And certainly the more a man is of the world, the more it intoxicateth; and age doth increase in the powers of understanding, than in the virtues and affections. . . .

The Forty-third, entitled "Of Beauty," also published 1612, the following is the most material portion:—

Beauty is like a rich stone, best plain set; and surely best in a body that is comely, though not of delicate shape, and that hath rather dignity of presence, than beauty. Neither is it almost seen that very beautiful persons are otherwise of great virtue, as if nature were rather busy in labour to produce excellency; and therefore beauty is accomplished, but not of great spirit, and study of behaviour than virtue. But this holds not always; for Cæsar, Titus Vespasianus, Philip le Bel of France, the Fourth of England, Alcibiades of Athens, Ismael of Persia, were all high and great spirits, and yet beautiful men of their times. . . . That is the best beauty which a picture cannot express, no nor the first of the life. There is no excellent beauty that hath not some imperfections in the proportion. . . .

There is the most striking part of the Forty-fourth,

entitled "Of Deformity," which likewise accords with that on Beauty in the edition of 1612:—

Whoever hath anything fixed in his person that duce contempt, hath also a perpetual spur in himself to overcome it, and deliver himself from scorn, therefore all deformed persons are extreme bold; first, as in their own defence as being to scorn, but in process of time by a general habit, stirreth in them industry, and especially of this kind, to observe the weakness of others, that they may have what to repay. Again, in their superiors it quencheth their ambition towards them, as persons that they think they may at last despise; and it layeth their competitors and emulators on as never believing they should be in possibility of advantage till they see them in possession, so that upon the matter great wit, deformity is an advantage to rising. . . .

The two next Essays, which are intimately connected and which both appeared first in 1625, although they will scarcely admit of curtailment. They are among the most elaborate and interesting in the collection. The Forty-fifth, entitled "Of Building," after some introductory remarks, proceeds as follows:—

You cannot have a perfect palace except you have several sides, a side for the banquet as is spoken of in the story of Esther, and a side for the household, the one for festivity and triumph, and the other for dwelling. I understand besides to be not only returns but parts of the front, and the sides to be uniform without, though severally partitioned within, as on both sides of a great and stately tower in the middle of the front, that as it were joineth them together on either side, would have on the side of the banquet in front one only room above stairs, of some forty foot high, and under it for a dressing or preparing place at times of triumph, and on the other side, which is the household side, I wish it divided first into a hall and a chapel (with a partition between them) of good stile and bigness, and those not to go all the way but to have at the further end a winter and a summer room, both fair, and under these rooms a fair and large cell under ground, and likewise some privy kitchens with pantries, and the like, as for the tower I would have two stories of eighteen foot high apiece above the tower, and a goodly leads upon the top, railed with statues in the middle, and the same tower to be divided into rooms as

The stairs likewise to the upper rooms, let them be fair open newel and finely railed in with images of brass colour, and a very fair landing place at the top of this to be, if you do not point any of the lower rooms to be a dining place of servants, for otherwise you shall have servants' dinner after your own, for the steam of it will rise up as in a tunnel. And so much for the front, only let the height of the first stairs to be sixteen foot, the height of the lower room.

At this front it is there to be a fair court, but three sides for the lower building than the front, and in all the four sides of that court fair staircases cast into turrets on the outside against within the row of buildings themselves; but these are not to be of the height of the front, but rather suitable to the lower building. Let the court not be so that it striketh up a great heat in summer and much water, but only some side alleys with a cross, and the middle space being kept shorn, but not too near shorn. At the return on the banquet side let it be all stately. In which galleries let there be three or five fine on the length of it, placed at equal distance, and five windows of several works. On the household side, for the presence and ordinary entertainments, with some chambers, and let all three sides be a double house with high lights on the sides, that you may have rooms sun both for forenoon and afternoon. Cast it also that you have rooms both for summer and winter, shady for summer and warm for winter. You shall have sometimes fair windows full of glass that one cannot tell where to become to feel the sun or cold; for inbowed windows I hold them best, (in cities indeed upright do better in respect of the street,) for they be pretty retiring places for the presence, and besides they keep both the wind and the sun from that which would strike almost through the room to pass the window; but let them be but few, four in all on the sides only.

In this court let there be an inward court of the same height, which is to be environed with the garden on the outside; and in the inside cloistered on all sides upon good beautiful arches as high as the first story. On the side towards the garden let it be turned to a grotto, or a shady place or arbour, and only have opening and windows towards the garden, and be level upon the floor no whit under ground to avoid all dampishness; and let there be

a fountain or some fair work of statues in
 court, and to be paved as the other court
 was to be the privy lodgings on both sides
 privy chambers, whereof you must foresee
 but an ordinary of the house or any special
 hall, with clean beds, bed chambers, another
 passage hall, thus upon the second story
 story a last gallery open upon the wall and
 below an open gallery upon pillars to the
 freshness of the garden. At the corner
 be way of return, let there be the defined
 lawn is paved, richly hatched, strewed with
 and a rich carpet as the house and all
 may be thought upon. In the upper gallery
 there may be the place of the great
 as a very pleasant form the wall with
 And thus is the for the number of the
 house have, before we come to the third
 court place with a wall above the second
 but in the garden, with the terrace, we
 upon the wall and a small court to the
 house, but not to be quite the very enclosure
 but not used with terraces under rock
 on the one sides, and a distance on the
 out with a lawn below. As for offices let
 have with some new galleries to use them
 need.

And here is the Forty-sixth. "Of

God Almighty first man and a creature,
 James a certain measure of the great
 spirit in a man, without a god, and things
 given him, a man. And a man and a
 god a man and a man, and a man
 become man a man and a man, and a man
 man and a man, and a man and a man
 there is a man and a man, and a man
 with a man and a man, and a man
 For Decemur and a man and a man
 you have the man and a man, and a man
 but, the man and a man, and a man
 motion, a man and a man, and a man
 blue, a man and a man, and a man

is staved; and sweet marjoram warm set. There follow the latter part of January and February the masses, which then blossom; crocus vernus, both the yellow and the grey; primroses, anemones, the early tulippa, *anthus orientalis*, *chamaeiris*, *fritellaria*. For March come violets, specially the single blue, which are the yellow daffodil, the daisy, the almond tree in blossom, the peach tree in blossom, the cornelian tree in blossom, sweet-brier. In April follow the double white wall-flower, the stock gilly-flower, the cowslip, the lilac, and lilacs of all natures, rosemary flowers, the double peony, the pale daffodil, the French honeysuckle, the cherry tree in blossom, the dammasin and plum blossom, the white thorn in leaf, the lilac tree. In May come pinks of all sorts, especially the blush roses of all kinds, except the musk, which comes later; strawberries, bugloss, columbine, the French honeysuckle, the africanus, cherry tree in fruit, ribes, figs in fruit, vine flowers, lavender in flowers, the sweet satyrian white flower, *herba muscovia*, *lilium convallium*, the musk rose in blossom. In July come gilly-flowers of all varieties, musk roses, the lime tree in blossom, early pears and apples in fruit, genittings, codlins. In August come plums in fruit, pears, apricots, barberries, filberts, musk roses, monk's hoods of all colours. In September come apples, poppies of all colours, peaches, melo-cotones, cornelians, wardenes, quinces. In October and the beginning of November come services, medlars, bullises, roses removed to come late, hollyhocks, and such like. Particulars are for the climate of London, but my meaning is received that you may have *ver perpetuum** as the place

because the breath of flowers is far sweeter in the air, (it comes and goes like the warbling of music,) than in the ground, therefore nothing is more fit for that delight than to have that be the flowers and plants that do best perfume the air. The damask and red, are fast flowers of their smells, so that you may walk by a whole row of them and find nothing of sweetness; yea, though it be in a morning's dew. Bays yield no smell as they grow, rosemary little, nor sweet marjoram. That which above all others yields the sweetest smell to the air is the violet, especially the white double violet

* *Perpetual spring.*

which comes twice a year, about the middle of April about Bartholomew-tide; next to that is the musk rose; the strawberry leaves dying with a most excellent odour, then the flower of the vine, it is a little dust like dust of a bent, which grows upon the cluster in the first cold forth; then sweet-brain, then wall-flowers, which are very lightful to be set under a parlour or lower chamber with then pinks and gilly-flowers, especially the matted pink clove gilly-flower; then the flowers of the lime tree, then honeysuckles, so they be somewhat afar off. Of bean fl I speak not because they are field flowers. But those which perfume the air most delightfully, not passed by as the rest being trodden upon and crushed, are three, that is but wild thyme, and water mints; therefore you are to set alleys of them to have the pleasure when you walk or tread.

For gardens (speaking of those which are indeed princely as we have done of buildings) the contents ought not well under thirty acres of ground, and to be divided into three parts, green in the entrance, a heath or desert in the going forth, the main garden in the midst, besides alleys on both sides. And I like well that four acres of ground be assigned to green, six to the heath, four and four to either side, and ten to the main garden. The green hath two pleasures, the one because nothing is more pleasant to the eye than green kept finely shorn; the other, because it will give you a straight alley in the midst by which you may go in front upon a hedge, which is to enclose the garden. But because that will be long and in great heat of the year or day, you are not to buy the shade in the garden by going in the sun through the green, therefore you are of either side the green to place a covert alley upon carpenters' work about twelve foot in height by which you may go in shade into the garden. As for the making of knots or figures with divers coloured earths, they may lie under the windows of the house on that side where the garden stands, they be but toys, you may see good sights many times in fairs. The garden is best square, encompassed on all the four sides with a stately hedge, the arches to be upon pillars of carpenters' work of ten foot high and six foot broad, and the spaces between of the same dimension with the breadth of the arch. Over the middle let there be an entire hedge of some four foot high, framed upon carpenters' work; and upon the upper hedge over the middle arch, a little turnet with a belly enough to receive a couple of birds; and over every space between the arches some

us, with broad plates of round coloured glass gilt, for
play upon. But this hedge I intend to be raised
not steep but gently slope of some six foot, set
flowers. Also I understand that this square of the
could not be the whole breadth of the ground, but to
either side ground enough for diversity of side alleys,
in the two covert alleys of the green may deliver you;
must be no alleys with hedges at either end of this
lance; not at the higher end for letting your prospect
fair hedge from the green, nor at the farther end for
our prospect from the hedge through the arches upon

ordering of the ground within the great hedge, I
variety of device, advising nevertheless, that what-
ever you cast it into, first it be not too busy or full of
swim I, for my part, do not like images cut out in
other garden stuff, they be for children. Little low
and like welts with some pretty pyramids, I like
in some places fair columns upon frames of carpen-
I would also have the alleys spacious and fair.
have closer alleys upon the side grounds, but none in
garden. I wish also in the very middle a fair
th three ascents and alleys, enough for four to walk
which I would have to be perfect circles, without any
or embossments, and the whole mount to be thirty
and some fine banqueting house with some chimneys
st, and without too much glass.

maintains they are a great beauty and refreshment, but
all, and make the garden unwholesome and full of
frogs. Fountains I intend to be of two natures, the
sprinkleth or spouteth water, the other a fair receipt
of some thirty or forty foot square, but without fish, or
mud. For the first the ornaments of images gilt, or
, which are in use, do well; but the main matter is,
they the water as it never stay either in the bowls or in
, that the waters be never by rest discoloured, green
the like, or gather any mossiness or putrefaction.
that it is to be cleansed every day by the hand, also
is up to it, and some fine pavement about it doth
for the other kind of fountain, which we may call a
ool, it may admit much curiosity and beauty, where-
will not trouble ourselves, as that the bottom be finely
ad with images; the sides likewise, and withal em-
with coloured glass and such things of lustre; en-
also with fine rails of low statues. But the main

point is the same, which we mentioned in the fountain, which is, that the water be in perpetuum by a water higher than the pool, and delivered by spouts and then discharged away under great equality of bores, that it stay little. And for arching water without spilling, and making it in forms (of feathers, drinking-glasses, canopies, &c.) they be pretty things to look on, but nothing of sweetness.

For the heath, which was the third part of our it to be framed, as much as may be, to a nature. Trees I would have none in it, but some thickets of sweet-briar and honeysuckle and some wild roses, and the ground set with violets, strawberries, &c. for these are sweet and prosper in the shade; and in the heath here and there, not in any order, little heaps, in the nature of mole-hills, (such as wild heaths,) to be set some with wild-thyme, some with germander, that gives a good flower, some with periwinkle, some with violets, some with berries, some with cowslips, some with daisies, some with roses, some with liliū convallium, some with anemones, some with bears'-foot, and the like low flowers, withal sweet and sightly. Part of which heath to be standards of little bushes pricked upon their top, set out; the standards to be roses, juniper, holly, &c. (but here and there, because of the smell of the red currants, gooseberries, rosemary, bays, &c. such like. But these standards to be kept with, as they grow not out of course.

For the side grounds you are to fit them with various private, to give a full shade. some of them, where you are to frame some of them likewise for shelter, if the wind blows sharp, you may walk as in a garden; those alleys must be likewise hedged at both ends from the wind; and these closer alleys must be ever firm, and no grass because of going wet. In many of them likewise, you are to set fruit trees of all sorts, as in walls as in ranges. And thus would be generally, that the borders wherein you plant your fruit trees be large, and low and not steep, and set with fine flowers and sparingly, lest they deceive the trees. At the side grounds I would have a mount of some height, leaving the wall of the enclosure breast high, to be open into the fields.

for as for shade, I would have you rest upon
of the side grounds, there to walk, if you be disposed,
of the year or day; but to make account that the
is for the more temperate parts of the year; and in
summer, for the morning and the evening or over-

ies, I like them not, except they be of that large-
may be turfed, and have living plants and bushes
that the birds may have more scope and natural
and that no foulness appear in the floor of the aviary.
made a plat form of a princely garden, partly by
tly by drawing, not a model, but some general
and in this I have spared for no cost. But it is
great princes, that for the most part taking advice
men, with no less cost, set their things together, and
old statues and such things for state and magnifi-
nothing to the true pleasure of a garden.

Next six Essays, which are all short, were all in
publication of 1597. The Forty-seventh, "Of
ing," concludes thus:—

ing with cunning persons we must ever consider
to interpret their speeches, and it is good to say little
and that which they least look for. In all negotia-
should be a man may not look to see and respect

*Iniquum petas, ut æquum feras,** is a good rule: man hath strength of favour, but otherwise a man may rise in his suit; for he that would have ventured at first lost the suitor, will not in the conclusion lose both and his own former favour. Nothing is thought so easy to a great person, as his letter; and yet, if it be not a cause, it is so much out of his reputation. . . .

The Fiftieth is entitled "Of Studies;" he begins of it:—

Read not to contradict and confute, nor to believe take for granted, nor to find talk and discourse, but to weigh and consider. Some books are to be tasted, others to be swallowed, and some few to be chewed and digested; that is, some books are to be read only in parts; others to be read curiously; and some few to be read wholly, and with diligence and attention. . . . Reading maketh a full man, conference a ready man, and writing an exact man. And therefore if a man write little, he had need have a great memory; if he write little, he had need have a present wit; and if he read little, he had need have much cunning to seem to know that he doth not. Histories make men wise; poets, witty; the mathematics, subtil; natural philosophy, deep; moral, grave; rhetoric, able to contend. *Abundant studia in mores.*

The Fifty-first, "Of Faction," begins and follows:—

Many have an opinion, not wise, that for a prince to keep his estate, or for a great person to govern his proceedings according to the respect to factions, is a principal part of wisdom; whereas contrariwise, the chiefest wisdom is either in those things which are general and wherein men of all factions do nevertheless agree, or in dealing with common to particular persons one by one. When it is carried too high and too violently, it is a sign of weakness in princes, and much to the prejudice both of their authority and business. The motions of factions under kings ought to be the motions (as the astronomers speak) of the inferior planets which may have their proper motions, but yet still to be carried by the higher motion of *primum mobile*.†

And here are a few sentences from the Fifty-second, "Of Covetousness and Parsimony."

much add to a man's reputation, and is (as queen said) 'like perpetual letters commendatory to have us;' to obtain them it almost sufficeth not to despise so shall a man observe them in others; and let himself with the rest. For if he labour too much to excell, he shall lose their grace, which is to be natural and low. Some men's behaviour is like a verse wherein measure is measured. How can a man comprehend great that breaketh his mind too much to small observations? It is a good precept generally in seconding another, yet somewhat of one's own; as if you would grant his opinion it be with some distinction; if you will follow his it be with condition; if you allow his counsel, let it alleging further reason. . . .

Fifty-third Essay, entitled "Of Praise," was first printed in 1612, and commences thus:—

Praise is the reflection of virtue, but it is as the glass or mirror which giveth the reflection. If it be from the common opinion it is commonly false and naught, and rather followeth passions than virtuous. For the common people understand many excellent virtues; the lowest virtues draw praise for themselves, the middle virtues work in them astonishment or admiration, but of the highest virtues they have no sense or feeling at all; but shows and species virtutibus similes* with them. Certainly fame is like a river, that drowns things light and swollen, and drowns things weighty

Fifty-fourth, entitled "Of Vain-Glory," which is in the edition of 1612, the latter part is as

—
The ease of learning the flight will be slow, without some show of ostentation. Qui de contemnendâ gloriâ libros componen suum inscribunt.† Socrates, Aristotle, Galen, are full of ostentation. Certainly vain-glory helpeth to corrupt a man's memory; and virtue was never so behold-man nature, as it received his due at the second hand. Had the fame of Cicero, Seneca, Plinius Secundus, lasted so well if it had not been joined with some

appearances like to virtues.

Those who write books on despising glory put their names on the page.

vanity in themselves; like unto varnish, that makes cells not only shine, but last. . . . Excusations, cessions, modesty well governed, are but arts of ostentation. And among those arts there is none better than that which Plinius Secus speaketh of, which is to be liberal of praise and commendation to others, in that wherein a man's self hath any perfection. For, saith Pliny, very wittily, 'In commending another to yourself right, for he that you commend is either superior to you in that you commend, or inferior. If he be inferior, he be to be commended, you much more; if he be superior, he be not to be commended, you much less.' Glorious men are the scorn of wise men, the admiration of fools, the idols of parasites, and the slaves of their own vanities. . . .

The Fifty-fifth, "Of Honour and Reputation," is the original Ten published in 1597. This is one of the sections —

The true marshalling of the degrees of sovereign honours are these: in the first place are conditores imperiorum, founders of states and commonwealths, such as were Romulus, Cyrus, Caesar, Ottoman, Ismael. In the second place are leges, lawgivers, which are also called second founders, or perpetui principes,* because they govern by their ordinances after they are gone; such were Lycurgus, Solon, Justinian, Edgar, Alfonso of Castile, the Wise, that made the Siete Partidas. In the third place are liberatores,† or salvatores;‡ such as compound the long miseries of civil wars, or deliver their country from servitude of strangers or tyrants; as Augustus Cæsar, Vespasianus, Aurelianus, Theodoricus, King Henry the Seventh of England, King Henry the Fourth of France. In the fourth place are propagatores, or propugnatores imperii,§ such as in honourable wars enlarge their territories or make noble defence against invaders. And in the last place are pæres patriæ, which rectify and make the times good wherein they live. But which last kinds need no examples, they are in such number.

The Fifty-sixth, which was first published in 1612, is entitled "Of Judicature." The following are extracts —

Judges ought to remember that their office is *jus dicere* and not *jus dare*; to interpret law, and not to make law, or give law. Else will it be like the authority claimed by

1. *Blame*, which under pretext of exposition of Scripture stick to add and alter, and to pronounce that they do not find; and by show of antiquity to introduce Judges ought to be more learned than witty, more than plausible, and more advised than confident, things integrity in their position and proper virtues; (with the law) 'is he, that removeth the land.' The mislayer of a mare stone is to blame, but it is not judge that is the capital remover of land-marks; witness the mischievous of lands and property. One foul stream more hurt than many foul examples; for there doth the stream, the other corrupteth the fountain. . . . ought to prepare his way to a just sentence, as God prepare his way by raising valleys and taking down when there appeareth on either side an high hand, unskillful, cunning advantages taken, combination, not counsel, then is the virtue of a judge seen, to make equal, that he may plant his judgment as upon an anvil. *Qui fortiter coniungit, elicit sanguinem;** and wine-press is hard wrought, it yields a harsh wine of the grape-stone. Judges must beware of hard ones and strained inferences, for there is no worse torture of laws, especially in case of laws penal; it to have care, that that which was meant for terror turned into rigour, and that they bring not upon the people a shower whereof the Scripture speaketh, *Pluet super eos;*† for penal laws pressed are a shower of snares upon them. Therefore let penal laws, if they have been sleepers, if they be grown unfit for the present time, be by law confined in the execution, *Judicis officium est, ut tempora rerum, &c.*‡ In causes of life and death, judges (as far as the law permitteth) in justice to remember and to cast a severe eye upon the example, but a mere eye upon the person. . . .

Parts of a judge in hearing are four: to direct the evidence to moderate length, repetition, or impertinency of it; to recapitulate, select, and collate the material points which hath been said; and to give the rule or sentence. There is above these is too much, and proceedeth either of unwillingness to speak, or of impatience to hear, or of

digging the nose brings blood.

will rain snares upon them.

the office of a judge to consider not only the facts but the circumstances of the facts.

shortness of memory, or of want of a staid and equal attitude. It is a strange thing to see, that the boldness of advocates should prevail with judges; whereas they should imitate God, whose seat they sit, who representeth the presumptuous giveth grace to the modest. But it is more strange that judges should have noted favourites, which cannot but cause multiplication of fees and suspicion of by-ways. There is due to the judge to the advocate some commendation and gratitude where causes are well handled and fair pleaded, especially towards the side which obtaineth not; for that upholds in silent the reputation of his counsel, and beats down in his conceit of his cause. There is likewise due to the public civil reprehension of advocates, where there appeareth counsel, gross neglect, slight information, indiscreet preparation or an over bold defence. And let not the counsel at the chop with the judge, nor wind himself into the handling of a cause anew, after the judge hath declared his sentence; by the other side, let not the judge meet the cause half way, give occasion to the party to say, his counsel or proofs not heard. . . .

From the Fifty-seventh, "Of Anger," which appeared in 1625, we extract a single paragraph:—

Anger is certainly a kind of baseness, as it appears with the weakness of those subjects in whom it reigns, children, women, old folks, sick folks. Only men must beware they carry their anger rather with scorn than with fear; so they may seem rather to be above the injury than below which is a thing easily done if a man will give law to himself in it. . . .

The Fifty-eighth, "Of the Vicissitude of Things," another of those added by the author to his last edition. It begins thus:—

Solomon saith, 'There is no new thing upon the earth.' So that as Plato had an imagination, 'That all knowledge is but remembrance;' so Solomon giveth his sentence, 'That novelty is but oblivion.*' . . .

* A little lower down comes a sentence which in Mr. Tagu's and most of the common editions stands,—"*As for conflagrations and great droughts, they do not merely dispeople but destroy.*" In the edition of Bacon's works in 2 vols. Lond. 1843, it is given:—"*As for conflagrations and droughts, they do merely dispeople and destroy.*" Both

both of a state arms do flourish; in the middle age
spring, and then both of them together for a time;
young age of a state, mechanical arts and merchand-
ising hath its infancy when it is but beginning, and
then its youth, when it is luxuriant and jo-
its strength of years, when it is solid and reduced;
to old age, when it waxeth dry and exhaust. But
not to look too long upon these turning wheels
lest we become giddy. As for the philology of
it but a circle of tales, and therefore not fit for this

are commonly added in the modern edi-
the one entitled "A Fragment of an Essay on
the other, "Of a King." The Fragment was
first published in 1657 by Dr. Rawley in the
of the *Resuscitatio*; and there can be no
authenticity. The following is the latter
being about the half of what we have:—

of that force, as there is scarcely any great action
with not a great part, especially in the war. Muci-
Vitellius, by a flame that he scattered, that Vitellius
pose to remove the legions of Syria into Germany,
ions of Germany into Syria; whereupon the legions
re infinitely inflamed. Julius Caesar took Pompey
, and laid asleep his industry and preparations, by
he cunningly gave out, how Caesar's own soldiers
not; and being wearied with the wars, and laden
sils of Gaul, would forsake him as soon as he came

Livia settled all things for the succession of her
m, by continual giving out that her husband Au-
upon recovery and amendment. And it is a usual
the bashaws, to conceal the death of the Great Turk
unizaries and men of war, to save the sacking of
ople and other towns, as their manner is. Themis-
Xerxes, king of Persia, post apace out of Grecia,
out that the Grecians had a purpose to break his

is equally inconsistent with the context. The true
may be gathered from the Latin:—*Illas populum*
is *absorbat aut destruat*; that is, "they do not
altogether, completely] dispeople or destroy."

bridge of ships which he had made athwart the Hellespont. There be a thousand such like examples, and the more they be the less they need to be repeated, because a man meeteth them everywhere: therefore let all wise governors have as great a watch and care over fames, as they have of the actions which design themselves.

Rawley notes that "the rest was not finished." A copy of the second edition of the *Resuscitatio* (1657) in the British Museum we find a MS note in an old hand stating that the Essay is continued in another piece contained in that collection, entitled "The Image of a Civil Character) of Julius Cæsar;" but this appears to be a mere fancy, and a mistaken one. The piece on Julius Cæsar was written by Bacon in Latin, from which was given in the second and third editions of the *Resuscitatio* is a translation by Rawley; and there is no probability that it was designed to have any connexion with this English Essay on Fame.

The Essay "Of a King" was first published along with another tract entitled "An Explanation what manner of persons those should be that are to execute the power or ordinance of the King's prerogative," in 1648 in a 4to. pamphlet, in which both are attributed to Bacon; and the Essay and Explanation were reprinted in the volume called *The Remains*, 1648, and in the re-impression of that volume in 1656 with the new title of *The Mirror of State and Eloquence*. But they were not included in any of the three editions of the *Resuscitatio* (1657, 1661, 1671); nor are they noticed by Tensson in the *Baconiana* (1679). The external evidence therefore is unfavourable to the authenticity of the Essay; for the collection called *The Remains* is of no authority. The style and manner of thinking, however, are, at least in some places, not unlike Bacon's, although the formal division into numbered paragraphs (which may have been the work of a transcriber) is peculiar. The following paragraphs, for instance, might very well have been written by Bacon:—

1. A king is a mortal god on earth, in whom all the

latter himself, that God hath with his name imparted unto him his nature also.

2. Of all kind of men, God is the least beholden unto them; for he doth most for them, and they do ordinarily least for Him.

3. A king that would not feel his crown too heavy for him, must wear it every day; but if he think it too light, he knoweth not of what metal it is made.

12. That king which is not feared is not loved; and he that is well seen in his craft, must as well study to be feared as loved; yet not loved for fear, but feared for love.

We may here also mention a somewhat longer piece, entitled "*An Essay on Death*," commonly printed, in the complete editions of Bacon, among what are called his Theological Works. The only authority for attributing it to Bacon is that of the *Remains* (1648), in which volume it first appeared. It is a composition of considerable beauty, but not in his manner. In the common collection of the Essays, it may be remembered, there is one on Death (the second), first printed in 1612.

It will be admitted by all that these Essays of Bacon's do at least, as he himself says of them, "come home to men's business and bosoms." They are full of that sort of wisdom which is profitable for the guidance of life, and to which every reader's experience of himself and of others responds. This they are, it is needless to say, without having anything of vulgarity or triviality; on the contrary, nearly every thought is as striking for its peculiarity and refinement as for its truth. But, with all their combined solidity and brilliancy, they are not much marked by any faculty of vision extending beyond actual humanity. Their pervading spirit, without being either low or narrow, is still worldly. It is penetrating and sagacious, rather than either far-seeing or subtle. The genius displayed in them is that of oratory and wit, rather than that of either metaphysics or the higher order of poetry. The author has a greater gift of looking into the heart of man than into the heart of things. He is observant, reflective, ingenious, fanciful, and, to the measure that all that allows, both eloquent and wise

but, it may be from the form or nature of such editions not admitting of it, he can hardly be said to have found these Essays very eminently either capacious or profound.

• Of its kind, however, though that kind may not be the highest, the writing is wonderful. What a spirit there is in every sentence! How admirably philosophy everywhere animated and irradiated with wit; and how fine a balance and harmony is preserved between the wit and the sense, the former never being fantastic any more than the latter dull! The spirit, too, though worldly, is never offensively so; throughout considerate, tolerant, liberal, generous; if we have little lofty indignation, we have no violence, or bitterness, or one-sidedness. It is a morality with which any tendency to enthusiasm or fanaticism in such matters will sympathize; but not wanting either in distinctness or in elevation more than in a reasonable charity. Prudence is doubt a large ingredient; but principle is by no means absent. Nor does much appear to be introduced into these Essays for mere effect. At any rate, the quality of the idea, of one sort or another, in proportion to the force, almost without example, at least with so little forcing or straining, so easy and smooth a flow. As the light is, it is so managed as to fall softly on the eye, to satisfy rather than to dazzle. One new or common thought is presented after another in more succession than in almost any other book; and yet the mind of the reader is neither startled nor fatigued, so that the master is the rhetorical art. Our review has necessarily been confined to a series of selections or samples, with such compactness everywhere, analysis or comment was impossible. But, although many things were left unnoticed in our abstract, we have endeavored to make it comprehend the portion of each Essay admitting of being detached from the rest (always, of course an indispensable condition), seemed to be remarkable.

but it may be from the form or nature of such a
 tion not admitting of it. He can hardly be said
 these passages very eminently either copious
 found.

(Of its kind however, though that kind may be
 the most interesting in the world, it is not a
 thing which is to be valued for its own sake,
 but for the wisdom of the authors.)

year 1601 occurred the trial, conviction, and
 of Bacon's friend Essex, and the publication
 by the government of what was called "A
 on of the Practices and Treasons of the earl
 accomplices, which was drawn up by Bacon,
 also appeared on the part of the crown at
 It is accordingly included among his works,
 as an "Apology," or defence of his conduct,
 deemed it expedient to print, probably in the
 in the form of a letter to the Earl of De

James I. became king of England by the
 Elizabeth, on the 24th of March, 1603; and
 is knighted on the 23rd of July, the day before
 ation, on which occasion above three hundred
 gentlemen received the same honour. In a letter
 few days previous to his relation Robert Lord
 afterwards Earl of Salisbury), the chief minister
 new king, he intimates that he would be glad to
 his divulged and almost prostituted honour,"
 her reasons, "because," he says, "I have found
 lerman's daughter, a handsome maiden, to my

This was Alice, one of the daughters and co-
 Benedict Barnham, Esq., alderman of London,
 afterwards married. He had also been con-
 his rank (or rather office, as it was then consi-
 king's counsel by a warrant signed by James
 op, on his way to London, on the 21st of April.*

ished by Mr. Collier in the Egerton Papers, p. 367.
 ugu's account, given under the year 1604 (*Life*, p.
 at Bacon was made by patent king's counsel learned

According to Mr. Montagu, it was in the fall of 1604 that he prepared and addressed to the king a work (which is, however, only a fragment) upon "Greatness of the Kingdom of Britain." In 1605 he published his "Two Books of the Proficiency and Advancement of Learning, Divine and Human," which he addressed to James. On new year's day, 1606, he presented to the king his short paper entitled "Considerations touching the Plantation in Ireland." In the course of the same year, according to Mr. Montagu (*Life*, pp. 140, 141), his "two publications," "Church Controversies," and the "Pacification of the Church." But in the first place neither of these appears to have been ever published till many years after both James and Bacon himself had left the world; secondly, it is clear from the second, certainly written at the beginning of the reign of James, that the first must have been written long before the end of the reign of Elizabeth. On the 26th of June, 1607, Bacon was appointed solicitor-general, on Sir Edward Coke being made Chief Justice of the Common Pleas. This year he is supposed to have communicated to his friends at that time, the then Bishop of Ely, and Sir Thomas Bodley, his notions in Latin of some of the principles of his philosophy, entitled *Cogitata et Visa*; the letters sent to them, which as there given, however, are both without date, are in the *Resuscitatio*. In 1609, or more probably

in the law, with a fee of forty pounds a-year, "which," as added, "is said to have been a 'grace scarce known.'" For this last expression reference is made in a footnote in the *Life* by Rawley; but Rawley uses it in speaking of his having been made queen's counsel extraordinary in the reign of Elizabeth, as Mr. Montagu has himself noticed in a preceding page (p. 21). Mr. Montagu adds, but without giving his authority, that the same day on which he was made king's counsel, he granted Bacon "by another patent under the great seal a pension of sixty pounds a-year, for special services received by his brother Anthony Bacon and himself." The same is stated in the *Biographia Britannica* on the authority of *Moniments in Rymer's Fœdera*, and with the additional information that the two patents are dated the 25th of August, 1609.

ming of what we should now call the year 1610 shed his Latin Treatise "*De Sapientia Veterum* (the *Wisdom of the Ancients*), of which a very good translation by his friend Sir Arthur uniformly, as far as we have observed, called by Mr. Montagu), already mentioned as the of the *Essays* into French. This translation ished in 1619, in Bacon's lifetime; and it is very that it may have had the advantage of his revision. The *Wisdom of the Ancients* is the next of what called the Moral Works which falls to be noticed; shall take our extracts from the English translation of Gorges, which is made from a second and edition of the Latin published in 1617. Another translation was also published in 1618, and a translation in 1619.

1, however, has omitted two short Dedications to the Latin work; the one (which is placed to the author's Alma Mater, the University of Cambridge, the other to the Lord Treasurer the Earl of , Chancellor of the University. The address to is chiefly remarkable for the elegant turning of similes and the general felicity of the expression, not to be adequately represented in a translation. It may be noticed as reflecting a favourite idea of Bacon's; he speaks of philosophy as then through old age as it were into a second childhood—*philosophia nostro veluti per senium repuerascens*, as he has in the Advancement of Learning, and more fully in the Novum Organum, of ancient times and youth, and modern times the old age of the world. For the rest, he professes his design in the preface to have been to pass over whatever was manifestly obsolete, or common-place, and to produce something that should have a respect to the steep and high life and the more remote recesses of science—*ad alta et scientiarum arcana*. In the Dedication to the King, he intimates his hope and belief that some of the stores of learning and knowledge may be brought to light and have been made by what he has here written

from the circumstance that contemplation gain something of new grace and vigour by ferred, as it has been in his case, to active; richer supply of matter for nourishment must strike its roots deeper, or at the least to spreading boughs and a greater show of yourselves, he adds, as I apprehend, are as over how wide a sphere the dominion of thine yours extends, nor to what a multiplicity of matters they apply.

The work is introduced by a Preface, which begins thus :—

The antiquities of the first age (except those which are credibly written) were buried in oblivion and silence : succeeded by poetical fables ; and fables again were the records we now enjoy. So that the mysteries of antiquity were distinguished and separated from the evidences of succeeding times by the veil of fiction interposed itself and came between those things which are extant, and those which are extant. . .

It is not his intention, Bacon goes on to say, to treat these ancient parables as mere exercises for the application of them, but with serious labour to extract from them what they contain of real mystery or hidden knowledge and wisdom, he continues,

I am persuaded (whether ravished with the antiquity, or because in some fables I find such a proportion between the similitude and the thing signified, apt and clear coherence in the very structure of propriety of names wherewith the persons or actions are inscribed and intitled) that no man can consistently think this sense was in the author's intent and meaning first invented them, and that they purposely should be so : for who can be so stupid and blind in the matter (when he hears how Fame, after the Giants were sprung up as their youngest sister, not to refer to the many and seditious reports of both sides, which

brought away Jupiter's nerves, which Mercury stole from him, and restored again to Jupiter, doth not presently perceive how easily it may be applied to powerful rebellions, which take from princes their sinews of money and authority, but so, that by subtilty of speech and wise edicts (the minds of their subjects being in time privily and as it were by stealth reconciled, they recover their strength again? Or when he hears how (in the memorable expedition of the gods against the giants) the bravery of Silenus his ass conduced much to the profligation of the giants, doth not confidently imagine that it was invented to show how the greatest enterprises of rebels are oftentimes dispersed with vain rumours and fears.

Moreover, to what judgment can the conformity and signification of names seem obscure? Seeing Metis, the wife of Jupiter, doth plainly signify counsel; Typhon, insurrection; Pan, universality; Nemesis, revenge, and the like. Neither let it trouble any man, if sometimes he meet with historical narrations, or additions for ornament's sake, or confusion of times, or something transferred from one fable to another to bring in a new allegory; for it could be no otherwise, seeing they were the inventions of men which lived in divers ages and had also divers ends; some being ancient, others neotericall, some having an eye to things natural, others to moral.

There is another argument, and that no small one neither, to prove that these fables contain certain hidden and involved meanings, seeing some of them are observed to be so absurd and foolish in the very relation that they show, and as it were proclaim a parable afar off; for such tales as are probable they may seem to be invented for delight, and in imitation of history. And as for such as no man would so much as imagine or relate, they seem to be sought out for other ends. For what kind of fiction is that wherein Jupiter is said to have taken Metis to wife, and, perceiving that she was with child, to have devoured her, whence himself conceiving brought forth Palladium out of his head. Truly I think there was never dream so different to the course of cogitation, and so full of monstrousness ever hatched in the brain of man. Above all things that prevails most with me and is of singular moment, many of these fables seem not to be invented of those by whom they are related and celebrated as by Homer, Hesiod, and others: for if it were so, that they took beginning in that age, and from those authors by whom they are delivered and brought to our hands, my mind gives me there could be no great or high matter expected or supposed to proceed from them in respect

these originals. But if with attention we consider it will appear that they were delivered and related formerly believed and received, and not as newly offered unto us. Besides, seeing they are diversely writers that lived near about one and the self-same time, may easily perceive that they were common things from precedent memorials, and that they became the reason of the divers ornaments bestowed on them by relations. And the consideration of this must not put in us a great opinion of them as not to be accounted the effects of the times or inventions of the poets, but the reliques or abstracted aires of better times, which from more ancient nations fell into the trumpets of the Grecians. . . .

If, however, any will obstinately deny all this, and refuse them to enjoy the gravity of judgment which they have—“although indeed it be but lumpish and leaden”—he will present the matter to them in this way :—

There is found among men (and it goes for current use of parables, and those (which is more to be referred to contrary ends, conducing as well to the concealing and keeping of things under a veil, as to the enlightening and laying open of obacurities. But omitting the former, to undergo wrangling, and assuming ancient fables as true and vagrant and composed only for delight), the latter are nevertheless still remain as not to be wrested from us by the violence of wit, neither can any (that is but meanly) hinder, but it must absolutely be received as a thing sober, free from all vanity, and exceeding profitable and necessary to all sciences. This is it, I say, that leads to the understanding of man by an easy and gentle passage through novel and abstruse inventions which any way differ from received opinions. Therefore in the first ages of human inventions and conclusions, which are now so common and vulgar, were new and not generally known, and were full of fables, enigmas, parables, and similes, by which they sought to teach and lay open new

[illegible]

It is perhaps no work of Bacon's that impresses one so fully with admiration of the ingenuity, boldness, and energy of his intellect as this treatise on the *Novum Organum*. Nothing in his interpretation of fables is borrowed or common-place; every thing is his own. Yet it seems all as natural as if no explanation were possible; and in some instances even my wonder were that it should not have been all received by every body. So exquisite is the art of exposition. And very note-worthy, too, it is how original views of Bacon's, with all this readiness and accordance which they command, have not become vulgar or trite. They have been preserved for more than two centuries, mixed up during time with the general mass of thought; yet there lie as bright and distinguishable as at first, like stars imbedded in common clay or gravel. Their purity has preserved them in their integrity, like gold and salt. Or, they are of too marked a character for it of their being taken up by any one who chooses, becoming common property. The king's broad seal stamped too deep upon them; the master mind that gave them forth has put too much of itself into them; they are too livingly shaped, coloured, inspired them from and through and through.

fables, or mythological legends, interpreted to the number of thirty-one. We must, however, confine our review to a very few of the more able expositions, which we shall give entire, or entire; for none of them will bear abridg-

will begin with that of the story of Typhon, to
an allusion has already been made in the
3:—

being vexed (say the poets) that Jupiter had begotten

Pallas by himself without her, earnestly pressed the gods and goddesses that she might also bring forth alone without him; and having by violence and force obtained a grant thereof, she smote the earth, and sprang up Typhon a huge and horrid monster. At birth she commits to a serpent (as a foster-father) to whom no sooner came to ripeness of years but he preferred to battle. In the conflict the giant getting the upper hand takes Jupiter upon his shoulders, carries him into a remote and obscure country, and (cutting out the sinews of his feet) brought them away, and so left him miserable and maimed. But Mercury recovering these nerves from Typhon by stealth, restored them again to Jupiter. Jupiter again by this means corroborated, assaults the monster and at the first strikes him with a thunder-bolt, and blood serpents were engendered. This monster at length being slain and flying, Jupiter casts on him the mount *Aethyra*; the weight thereof crushed him.

This fable seems to point at the variable fortune of princes and the rebellious insurrection of traitors in a state. Princes may well be said to be married to their dogs; Jupiter was to Juno; but it happens now and then that princes are debased by the long custom of empyring and bending to tyranny, they endeavour to draw all to themselves, rejecting the counsel of their nobles and senators, but in their own brain, that is, dispose of things by their own and absolute power. The people (repining at this) create and set up a chief of their own choice. This is the secret instigation of the peers and nobles, doth in part take his beginning, by whose connivance the prince being set on edge, there follows a kind of murmur and content in the state, shadowed by the infancy of the prince, which being nursed by the natural pravity and malignity of the vulgar sort (unto princes as infestants), is again repaired by renewed strength, and at length breaks out into open rebellion, which, because it brings fire and mischief upon prince and people, is represented by the deformity of Typhon: his hundred heads signify the many powers; his fiery mouth his inflamed intents; his circles their pestilent malice in besieging; his iron breast his merciless slaughters; his eagle's talons their greediness; his plumed body their continual rumours and scoutings; and such like. And sometimes these rebellions grow so great that princes are enforced (transported as it were by

ing the chief seats and cities of the kingdom) to their power, and being deprived of the sinews of money, betake themselves to some remote and obscure in their dominions. But in process of time, if they misfortunes with moderation, they may recover their by the virtue and industry of Mercury, that is, they becoming affable and by reconciling the minds and their subjects with grave edicts and gracious speech) alacrity to grant aids and subsidies whereby to their authority anew. Nevertheless having learned and wary, they will refrain to try the chance of for-
 ar, and yet study how to suppress the reputation of by some famous action, which if it fall out answer-
 their expectation, the rebels finding themselves weak-
 fearing the success of their broken projects, betake
 to some slight and vain bravadoes like the hissing
 , and at length in despair betake themselves to flight,
 when they begin to break, it is safe and timely for
 pursue and oppress them with the forces and weight
 of the kingdom as it were with the mountain *Ætna*.

as there is no one of these interpretations that
 the whole so admirable as that entitled "Pan, or
 " and it is further recommended to special
 as having been selected by Bacon himself to be
 his examples when treating of this method of
 regaining the lost wisdom of the old world in the second
 of his work *De Augmentis Scientiarum*, and there
 with some additions and other alterations. The
 of Pan, he begins by observing, under whose
 the ancients have exquisitely described Nature,
 is left by them doubtful; some accounts making
 him have been the son of Mercury, others the off-
 spring of Penelope and all her suitors, while others say
 he was the son of Jupiter and Hybris, which signi-
 fies proudly or disdain. In all the accounts, however,
 is allotted that the *Parcæ*, or Destinies, were his

as portrayed by the ancients in this guise; on his head a
 cornucopia that reach to heaven, his body rough and hairy,
 long and shaggy, his shape disformed above like a

man, below like a beast, his feet like goat's hoofs, bearing ensigns of his jurisdiction, to wit, in his left hand a seven reeds, and in his right a sheep-hook or a staff' cross the upper end, and his mantle made of a leopard's skin; dignities and offices were these. he was the god of herds, shepherds, and of all rural inhabitants; chief president of hills and mountains, and next to Mercury the ambassador to the gods. Moreover he was accounted the leader and commander of the nymphs, which were always wont to dance rounds and frisk about him; he was accosted by the Satyrs, the old Sileni. He had power also to strike men with terrors, those especially vain and superstitious, which are termed fears. His acts were not many for ought that can be in records, the chiefest was, that he challenged Cupid at wrestling, in which conflict he had the foil. The tale goes that he caught the giant Typhon in a net and held him. Moreover when Ceres, grumbling and chafing that Proserpine was ravished, had hid herself away, and that all the good pains (by dispersing themselves into every corner) to find her out, it was only his good hap (as he was hunting, to find her, and acquaint the rest where she was. He presumed to put it to the trial who was the best musician, he or Apollo, and by the judgment of Midas was indeed preferred. The wise judge had a pair of ass's ears privily chopped off, and a muddle for his sentence.

Little or nothing, it is added, is reported of his age. We are only told that he loved the nymph Echo, whom he took to wife; and that Cupid, whom he had injured by audaciously challenging him to a wrestling-match, in his spite and revenge, inflamed him with a passion for another pretty wench called Syrinx. Moreover he had no issue; only he was the reputed father of a little girl called Iambe,* that with many pretty tales was wont to make strangers merry. Some, however, think Iambe was really his daughter by his wife Echo.

This (if any he) is a noble tale, as being laid out and embellied with the secrets and mysteries of nature.

* Carelessly misprinted Iambe in all or almost all editions.

us (as his name imports) represents and lays open the all things or nature. Concerning his original there are two only opinions that go for current; for either he came of Mercury, is, the word of God, which the holy Scriptures without all controversy affirm, and such of the philosophers as had any ink of divinity assented unto, or else from the confused seeds things. For they that would have one simple beginning it unto God; or if a materiate beginning, they would have various in power. So that we may end the controversy with distribution, that the world took beginning either from Mercury or from the seeds of all things.

Virg. Eclog. 6.

Namque canebat uti magnum per inane coacta
Semina, terrarumque, animæque, marisque fuissent,
Et liquidi simul ignis; ut his exordia primis
Omnia, et ipse tener mundi concreverit orbis.

For rich-vein'd Orpheus sweetly did rehearse
How that the seeds of fire, air, water, earth,
Were all pack'd in the vast void universe;
And how from these as firstlings all had birth,
And how the body of this orbique frame,
From tender infancy so big became.

As touching the third conceit of Pan's original, it seems the Grecians (either by intercourse with the Egyptians, or way or other) had heard something of the Hebrew mysteries; it points to the state of the world, not considered in immortality, but after the fall of Adam, exposed and made subject to death and corruption; for in that state it was, and thus to this day, the offspring of God and sin. And therefore all these three narrations concerning the manner of Pan's coming may seem to be true, if it be rightly distinguished between things and times. For this Pan or Nature (which we ought to contemplate, and reverence more than is fit) took beginning from the word of God by the means of confused matter, the entrance of prevarication and corruption. The Destiny will be thought the sisters of Pan or Nature, because beginnings and continuances, and corruptions, and depressions, and dissolutions, and eminences, and labours, and felicity of things, and all the chances which can happen unto things are linked with the *chain of causes natural*.

Horns are attributed unto him because horns are the root and sharp at the ends, the nature of all things like a pyramid, sharp at the top. For individual things being infinite are first collected into species many also; then from species into generals, and from (by ascending) are contracted into things or notions universal, so that at length Nature may seem to be contrived to unity. Neither is it to be wondered at that Pan be heaven with his horns, seeing the height of nature's ideas do in some sort pertain to things divine, and ready and short passage from metaphysic to natural.

The body of nature is elegantly and with deep depainted hairy, representing the beams or operations; for beams are as it were the hairs and bristles, and every creature is either more or less beamy, which is apparent in the faculty of seeing, and no less in operation and operation that effectuates upon a distant object, soever works up anything afar off, that may rightly be said to dart forth rays or beams.

Moreover Pan's beard is said to be exceeding long, because the beams or influences of celestial bodies do operate farthest of all, and the sun (when his higher half is covered with a cloud) his beams break out in the lower and he were bearded.

Nature is also excellently set forth with a lion's head, with respect to the differences between superior and inferior creatures. For the one part, by reason of their perpetuity of motion, and constancy, and dominion over earth and earthly things, is worthily set out by a lion; and the other part in respect of their perpetual unconstant motions, and therefore needing to be made like the celestial, may be well fitted with the figure of a lion's head. This description of his body pertains also to the participation of species, for no natural being seems to be but as it were participating and compounded of two for example; man hath something of a beast, a beast of a plant, a plant something of an inanimate body; and all natural things are in very deed bisected, that is compounded of a superior and inferior species.

It is a witty allegory, that same of the feet of a goat, signifying the upward tending motion of terrestrial beings towards the air and heaven, for the goat is a climbing creature, and to be hanging about the rocks and steep mountains is done also in a wonderful manner, even by those

ds doth evidently demonstrate the consent and discordant concord of all inferior creatures, which ; the motion of the seven planets ; and that of the may be excellently applied to the order of nature, artly right, partly crooked ; this staff therefore or cially crooked in the upper end, because all the ivine providence in the world are done in a far circular manner, so that one thing may seem to be l yet indeed a clean contrary brought to pass, as the seph into Egypt, and the like. Besides in all wise ernment, they that sit at the helm do more happily purposes about, and insinuate more easily into the ie people by pretexts and oblique courses than by ods ; so that all sceptres and maces of authority ry deed to be crooked in the upper end.

ak or mantle is ingeniously feigned to be the skin of ecause it is full of spots. So the heavens are spot: rs, the sea with rocks and islands, the land with every particular creature also is for the most part ith divers colours about the superficies, which is as antle unto it.

e of Pan can be by nothing so lively conceived and by feigning him to be the god of hunters, for every on, and so by consequence motion and progression, else but a hunting. Arts and sciences have their human counsels their ends which they earnestly All natural things have either their food as a

nature by too much art is corrupted. So as the same poet (though in the sense of love) might be here verified

Pars minima est ipsa puella sui.

The maid so trick'd herself with art,
That of herself she is least part.

He was held to be lord president of the mountains in the high mountains and hills nature lays herself and men most apt to view and contemplation.

Whereas Pan is said to be (next unto Mercury) the first of the gods, there is in that a divine mystery contained to the word of God the image of the world proclaiming and wisdom divine, as sings the sacred poet, *Ps. xix. enarrant gloriam Dei, atque opera manuum ejus in cunctis monumentis.* The heavens declare the glory of God, and his work sheweth the works of his hands."

The Nymphs, that is, the souls of living things, take their delight in Pan. For these souls are the delights of Nature, and the direction or conduct of these Nymphs is the great reason attributed unto Pan, because the souls of living do follow their natural dispositions as their nature, with infinite variety every one of them after his kind, doth leap and frisk and dance with incessant motion. The Satyrs and Sileni also, to wit, youth and old age, are of Pan's followers; for of all natural things there is no age so young, and (as I may say) a dancing age, and no age so old, that is dull, lolling, and reeling. The carriages and motions of both which ages to some such as Democritus (who would observe them duly) might peradventure seem ridiculous and deformed as the gambols of the Satyrs or the Sileni.

Of those fears and terrors which Pan is said to be the cause of, there may be this wise construction made; Nature hath bred in every living thing a kind of fear, tending to the preservation of its own life and to the repelling and shunning of all things hurtful to it. Nature knows not how to keep a mean, but always is full of vain and empty fears with such as are discreet and such as are not, so that all things (if their insides might be seen) are full of Panic frights. But men, especially in the night and diverse times, are wonderfully infatuated with this notion, which indeed is nothing else but a Panic terror.

Concerning the audacity of Pan in challenging

ng; the meaning of it is, that matter wants no inclined desire to the relapsing and dissolution of the world. The old Chaos, if her malice and violence were not reined and kept in order, by the prepotent unity and agreement of things signified by Cupid, or the god of love; and were it was a happy turn for men and all things else, that conflict Pan was found too weak and overcome. The same effect may be interpreted his catching of him in a net: for howsoever there may sometimes happen sudden unwonted tumors (as the name of Typhon imports) in the sea or in the air, or in the earth, or elsewhere, yet he doth intangle it in an intricate toil, and curb and rein it, as it were with a chain of adamant, the excesses and disorders of these kind of bodies.

For as much as it was Pan's good fortune to find out him as he was hunting, and thought little of it, which none other gods could do, though they did nothing else but hunt, and that very seriously; it gives us this true and useful admonition; that we expect not to receive things necessary for life and manners from philosophical abstractions, as the greater gods; albeit they applied themselves to no study, but from Pan; that is, from the discreet observation and experience, and the universal knowledge of the things of the world; whereby (oftentimes even by chance, and as it comes in hunting) such inventions are lighted upon.

The quarrel he made with Apollo about music, and the resolution thereof, contains a wholesome instruction, which may serve to restrain men's reasons and judgments with reins of reason, from boasting and glorying in their gifts. For there is to be a twofold harmony, or music; the one of divine wisdom, and the other of human reason. Now to the ears of the gods, that is to human judgment, the administration of the world and creatures therein, and the most secret judgments, sound very hard and harsh; which folly, albeit it be not out with ass's ears, yet notwithstanding these ears are not open, and do not openly appear, neither is it perceived or is it a deformity by the vulgar.

Truly, it is not to be wondered at, that there is nothing said unto Pan concerning loves, but only of his marriage choice. For the world or nature doth enjoy itself, and in all things else. Now he that loves would enjoy somewhat, but where there is enough there is no place left to desire.

Therefore there can be no wanton love in Pan or the ass, nor desire to obtain anything (seeing he is contented

with himself) but only speeches, which (if plain) may be dictated by the nymph, Echo, or if more quaint by Syrinx is an excellent invention that Pan or the world is said to be the choice of Echo only (above all other speeches or voices) his wife: for that alone is true philosophy, which doth fully render the very words of the world; and it is written otherwise than the world doth dictate, it being nothing but the image or reflection of it, not adding anything own, but only iterates and resounds. It belongs also to the sufficiency or perfection of the world, that he begets nothing for the world doth generate in respect of its parts, but in respect of the whole how can it generate, seeing without it is nobody? Notwithstanding all this, the tale of that tall girl faltered upon Pan, may in very deed with great reason be added to this fable, for by her are represented those vain idle paradoxes concerning the nature of things which have been frequent in all ages, and have filled the world with disputes, fruitless if you respect the matter, changelings in respect the kinds, sometimes creating pleasure, sometimes confusion with their overmuch prattling.

Another of the interpretations repeated with comment in the *De Augmentis* is that of the fable "Perseus, or War:"—

Perseus is said to have been employed by Pallas for the destroying of Medusa, who was very infestuous to the western parts of the world, and especially about the utmost coast of Hyberia. A monster so dire and horrid, that by her aspect she turned men into stone. This Medusa alone of the Gorgons was mortal, the rest not subject to death. He therefore preparing himself for this noble enterprise, had arms and gifts bestowed on him by three of the gods. Mercury gave him wings annexed to his heels, Pluto a helmet, Pallas a sword and a looking-glass. Notwithstanding (although he was thus furnished) he went not directly to Medusa, but first to the Graeae, which by the mother's side were sisters to the Gorgons. These Graeae from their birth were hoar-headed, resembling old women. They had but one only eye, and one tooth among them all, both which, she that had occasion to go abroad, would take with her, and at her return to lay them down again. This eye and tooth they lent to Perseus: and being thus furnished for the effecting of his design, he hastens towards Medusa. Her he found sleeping

first not present himself with his face towards her, lest he should awake; but turning his head aside beheld her in Pallas's glass, and (by this means directing his blow) cut off her head; from whose blood gushing out, instantly came forth the flying horse. Her head thus smote off, Perseus cast it on Pallas her shield, which yet retained this virtue, that whatsoever looked upon it should become as stupid as a stone or like one planet-stricken.

This fable seems to direct the preparation and order, that is used in making of war; for the more apt and considerate making whereof, three grave and wholesome precepts (being of the wisdom of Pallas) are to be observed.

First—That men do not much trouble themselves about the state of neighbour nations, seeing that private possessions and empires are enlarged by different means; for in the augmentation of private revenues, the vicinity of men's territories is considered: but in the propagation of public dominions, the occasion and facility of making war, and the fruit expected ought to be instead of vicinity. Certainly this was the case, what time their conquests towards the west scarce went beyond Liguria, did yet in the east bring all the provinces as far as the mountain Taurus within the compass of arms and command: and therefore Perseus, although he was bred and born in the east, did not yet refuse to undertake expedition even to the uttermost bounds of the west.

Secondly—There must be a care had that the motives of war be just and honourable, for that begets an alacrity, as well in soldiers that fight, as in the people that pay, it draws on recruits, and brings many other commodities besides. There is no pretence to take up arms more pious, than the punishing of Tyranny; under which yoke the people lose courage, and are cast down without heart and vigour, as in the sight of Medusa.

Thirdly—It is wisely added, that seeing there were three heads (by which wars are represented) Perseus undertook only that was mortal; that is, he made choice of such a kind of war as was likely to be effected and brought to a conclusion, not pursuing vast and endless hopes.

The furnishing of Persens with necessaries was that which advanced his attempt, and drew fortune to be of his side; and speed from Mercury, concealing of his counsels from Venus, and Providence from Pallas.

There is it without an allegory, and that full of matter too, that the wings of celerity were fastened to Persens his heels,

and not to his ankles, to his feet and not to his shoulders: cause speed and celerity is required, not so much in the preparations for war, as in those things which second and aid to the first; for there is no error in war more frequent than that prosecutions and subsidiary forces do fail to answer the alacrity of the first onsets.

Now for that helmet which Pluto gave him, power to make men invisible, the moral is plain; but that twofold of providence (to wit the shield and looking-glass) is for mortality; for that kind of providence which like a shield avoids the force of blows is not alone needful, but that also which the strength and motions, and counsels of the enemy are descried, as in the looking-glass of Pallas.

But Perseus albeit he were sufficiently furnished with arms and courage, yet was he to do one thing of special importance before he entered the lists with this monster, and that was to have some intelligence with the Gorgons. These Gorgons are persons which may be termed the Sisters of War, not descended from the same stock, but far unlike in nobility of birth; for war is general and heroicall, but treasons are base and ignominious. Their description is elegant, for they are said to be old-headed, and like old women from their birth; by reason traitors are continually vexed with cares and trepidations. But all their strength (before they break out into open rebellions) consists either in an eye or in a tooth; for every factious man alienated from any state contemplates and bites. Besides eye and tooth is as it were common; for whatsoever they learn and know is delivered and carried from one to another by the hands of faction. And as concerning the tooth, they bite alike, and sing the same song, so that hear one and hear all. Perseus therefore was to deal with these Gorgons for the love of their eye and tooth. Their eye to discover, and tooth to sow rumours and stir up envy, and to molest and trouble the minds of men. These things therefore being considered and prepared, he addresses himself to the action of war, and sets upon Medusa as she slept; for a wise captain never assaults his enemy when he is unprepared and unsecure, and then is there good use of Pallas her glass. For men, before it come to the push, can acutely pry into and discern their enemy's estate; but the best use of this glass is at the very point of danger, that the manner of it may be considered, as that the terror may not discourage, which is remedied by that looking into this glass with the face turned towards Medusa.

The monster's head being cut off there follow two effects. The first was the procreation and raising of Pegasus, by which may evidently be understood Fame, that (flying through the world) proclaims victory. The second is the bearing of Medusa's head in his shield; to which there is no kind of defence for excellency comparable; for the one famous and memorable act prosperously effected and brought to pass, doth restrain the motions and insolencies of enemies, and makes envy herself silent and amazed.

A third of these expositions inserted in the *De Augmentis* is that entitled "Dionysus [the Greek name for Bacchus], or Passions." It is said that Jupiter's paramour, Semele, having bound him by an inviolable oath to grant her one request, desired that he would come to her in the same form in which he was accustomed to visit Juno; the result of which was that the miserable wench was consumed with lightning.

But the infant which she bare in her womb, Jupiter the father took out, and kept it in a gash which he cut in his thigh, till the months were complete that it should be born. This burden made Jupiter somewhat to limp, whereupon the child (because it was heavy and troublesome to its father, while it lay in his thigh) was called Dionysus. Being born, it was committed to Proserpina for some years to be nursed, and being grown up, it had such a maiden-face, as that a man could hardly judge whether it were a boy or a girl. He was dead also, and buried for a time, but afterward revived. Being but a youth, he invented and taught the planting and dressing of vines, the making also, and use of wine, for which becoming famous and renowned, he subjugated the world even to the uttermost bounds of India. He rode in a chariot drawn with tigers. There danced about him certain deformed hobgoblins called Cobali, Acratus, and others, yea even the Muses also were some of his followers. He took to wife Ariadne, forsaken and left by Theseus. The tree sacred unto him was the ivy. He was held the inventor and institutor of sacrifices, and ceremonies, and full of corruption and cruelty. He had power to strike men with fury or madness; for it is reported, that at the celebration of his orgies, two famous worthies, Pentheus and Orpheus, were torn in pieces by certain frantic women, the one because he got upon a tree to behold their

ceremonies in these sacrifices, the other for making music with his harp. And for his guests, they are in manner the same with Jupiter's.

There is such excellent morality couched in this fable that moral philosophy affords not better; for under the person of Bacchus is described the nature of affection, passion, perturbation, the mother of which (though never so long) is nothing else but the object of apparent good in the appetite. And it is always conceived in an unlawful manner, rashly propounded and obtained, before well understood or considered; and when it begins to grow, the mother which is the desire of apparent good ly too much ferments, is destroyed and perisheth: nevertheless (whilst yet it is imperfect embryo) it is nourished and preserved in humane soul (which is as it were a father unto it, as presented by Jupiter), but especially in the inferior thereof, as in a thigh, where also it causeth so much trouble and vexation, as that good determinations and actions much hindered and lained thereby, and when it comes confirmed by consent and habit, and breaks out, as it were into act, it remains yet a while, with Proserpina as a nurse, that is, it seeks corners and secret places, and as it creeps under ground, until (the reins of shame and fear laid aside in a pampered audaciousness) it either takes pretext of some virtue, or becomes altogether impudent and shameless. And it is most true, that every vehement passion is of a doubtful sex as being masculine in the first moment, but feminine in prosecution.

It is an excellent fiction that of Bacchus's reviving passions do sometimes seem to be in a dead sleep, and were utterly extinct, but we should not think them to be indeed, no, though they lay, as it were, in their grave: let there be but matter and opportunity offered, and you see them quickly to revive again.

The invention of wine is wittily ascribed unto him; as affection being ingenious and skilful in finding out which brings nourishment unto it: and indeed of all things known to men, Wine is most powerful and efficacious to excite and kindle passions of what kind soever, as being in manner common nurse to them all.

Again his conquering of nations, and undertaking his expeditions is an elegant device: for desire never rests

chariot also is well said to be drawn by tigers : for as any affection shall from going afoot, be advanced to a chariot, and shall captivate reason, and lead her in ph, it grows cruel, untamed, and fierce against what withstands or opposeth it.

worth the noting also, that those ridiculous hobgoblins ought in, dancing about his chariot : for every passion use, in the eyes, face and gesture, certain undecent, seeming, apish, and deformed motions, so that they any kind of passion, as in anger, arrogancy or love, orious and brave in their own eyes, do yet appear to mis-shapen and ridiculous.

that the Muses are said to be of his company, it shews there is no affection almost which is not soothed by some wherein the indulgence of wits doth derogate from the Muses, who (when they ought to be the mistresses are made the waiting-maids of affections.

1, where Bacchus is said to have loved Ariadne, that seduced by Theseus ; it is an allegory of special observation for it is most certain, that passions always covet and that which experience forsakes ; and they all know have paid dear for serving and obeying their lusts) that it be honour, or riches, or delight, or glory, or knowledge or any thing else which they seek after, yet are they cast off, and by divers men in all ages, after experience had, utterly rejected and loathed.

er is it without a mystery, that the ivy was sacred thus : for the application holds, first, in that the ivy green in winter. Secondly, in that it sticks to, with, and overtoppeth so many diverse bodies, as trees, and edifices. Touching the first, every passion doth violence and reluctance, and as it were, by an Antipath-like the ivy of the cold of winter), grow fresh y. And as for the other, every predominate affection gain (like the ivy) embrace and limit all human and determinations, adhering and cleaving fast unto

er is it a wonder, that superstitious rites and ceremonies attributed unto Bacchus, seeing every giddy-headed ceeps in a manner revel-rout in false religions : or that se of madness should be ascribed unto him, seeing affection is by nature a short fury, which (if it grow it, and become habitual) concludes madness.

turning the rending and dismembering of Pentheus and

Orpheus, the parable is plain, for every prevalent affection outrageous and severe and against curious inquiry, and wholesome and free admonition.

Lastly, that confusion of Jupiter and Bacchus, their persons may be well transferred to a parable, seeing noble and famous acts, and remarkable and glorious merits, do sometimes proceed from value, and well ordered reason, and magnanimity, and sometimes from a secret affection, and hidden passion, which are so dignified with the celebrity of fame and glory, that a man can hardly distinguish between the acts of Bacchus and the deeds of Jupiter.

We could wish to add several others; but we have space for only one more; that of "Orpheus, or Philosophy:"—

The tale of Orpheus, though common, had never the fortune to be fitly applied in every point. It may seem to represent the image of Philosophy: for the person of Orpheus (a man admirable and divine, and so excellently skilled in kinds of harmony, that with his sweet ravishing music he could as it were charm and allure all things to follow him) may carry a singular description of Philosophy, for the labours of Orpheus do so far exceed the labours of Hercules in dignity and efficacy, as the works of wisdom excel the works of valour.

Orpheus, for the love he bore to his wife, snatched, as it were, from him by untimely death, resolved to go down into hell with his harp, to try if he might obtain her of the infernal powers. Neither were his hopes frustrated, for having appeased them with the melodious sound of his voice and tones, prevailed at length so far, as that they granted him leave to take her away with him; but on this condition, that he should follow him, and he not to look back upon her, till he came to the light of the upper world; which he, impatient out of love and care, and thinking that he was in a moment past all danger, nevertheless violated, insomuch that the covenant is broken, and she forthwith tumbles back again into hell. From that time Orpheus falling into a deep melancholy, became a contemner of womankind, and quenched himself to a solitary life in the deserts, where, by the same melody of his voice and harp, he first drew the manner of wild beasts unto him, who, (forgetful of his savage fierceness, and casting off the precipitate provocations

very, not caring to satiate their voracity by hunting
 as at a Theatre in fawning and reconciled amity
 one another, stand all at the gaze about him, and at-
 tend their ears to his music. Neither is this all, for
 was the power and alluding force of his harmony,
 how the woods and moved the very stones to come and
 move in an orderly and decent fashion about him,
 things succeeding happily, and with great admiration for
 at length certain Thracian women (possessed with
 of Bacchus) made such a horrid and strange noise
 in cornets that the sound of Orpheus's harp could not
 be heard; insomuch as that harmony, which was the
 that order and society being dissolved, all disorder
 gain; and the beasts (returning to their wonted nature)
 gave another unto death as before; neither did the
 trees remain any longer in their place; and Orpheus
 was by these female Furies torn in pieces, and cast
 over the desert. For whose cruel death the river
 (sacred to the Muses) in horrible indignation hid his
 the ground and raised it again in another place.
 meaning of this fable seems to be thus. Orpheus's
 of two sorts, the one appealing the infernal powers,
 attracting beasts and trees. The first may be fitly
 to natural philosophy, the second to moral or civil dis-

most noble work of natural philosophy is the restitu-
 renovation of things corruptible; the other (as a lesser
 it) the preservation of bodies in their estate, detain-
 from dissolution and putrefaction. And if this gift
 done in mortals, certainly it can be done by no other
 man by the due and exquisite temper of nature, as by the
 and delicate touch of an instrument. But seeing it is of
 most difficult, it is seldom or never attained unto; and
 likelihood for no other reason, more than through curious
 and untimely impatience. And therefore philo-
 sopherly able to produce so excellent an effect in a pen-
 sion (and that without cause), busies herself about
 objects, and by persuasion and eloquence, insinuating
 of virtue, equity and concord in the minds of men;
 altitudes of people to a society, makes them subject
 obedient to government, and forgetful of their un-
 affections whilst they give ear to precepts, and
 themselves to discipline; whence follows the building
 of towns, erecting of towns, planting of fields and orchards,

with trees and the like, insomuch that it would not be to say, that even thereby stones and woods were called together and settled in order. And after serious trial and frustrated about the restoring of a body mortal, the of civil affairs follows in its due place; because by demonstration of the inevitable necessity of death men are moved to seek eternity by the fame and glory of their. It is also wisely said in the fable, that Orpheus was from the love of women and marriage, because the devil wellock and the love of children do for the most part men from enterprising great and noble designs for the good, holding posterity a sufficient step to immortality actions.

Besides even the very works of wisdom (although in all human things they do most excel) do nevertheless with their periods. For it happens that (after kingdoms and commonwealths have flourished for a time) even tumults, seditions, and wars arise; in the midst of which lawfully first laws are silent, men return to the pravity of their fields and towns are wasted and depopulated; and (as their fury continue) learning and philosophy must be dismembered, so that at a few fragments only, and in places will be found like the scattered boards of shipwreck; a barbarous age must follow; and the streams of Helicon hid under the earth until the vicissitude of things passing break out again and appear in some other remote nation, not perhaps in the same climate.

Very ingenious, too, are the explanations of the of Cupid, of Dædalus, of Nemesis, of Prometheus, the Sphinx, of Proserpina, and of the Sirens.

SECTION III.

APOPHTHEGMS AND OTHER MORAL WORKS.

at fact in Bacon's biography that Mr. Mon-
 eris is, that he was made one of the judges of
 Court of the Verge. But the learned biographer,
 custom, leaves us to infer, if that were possible,
 appointment did not take place in any year.
 The account given by Dugdale, in his
 is, that in the 9th of King James, which
 is 1611, "he was made joint judge with Sir
 Wavasor, then Knight Marshal, of the Knight
 Court, then newly erected within the verge of
 's house." Meanwhile he still held his office of
 general, till he exchanged it for that of attorney-
 on the 27th of October, 1613, —not 1612, as Mr.
 makes it—on the promotion of Sir Henry
 ebe Chief Justice of the Common Pleas, Coke
 een removed to the King's Bench. Mr. Mon-
 kes him to have now composed "his work for
 g and amending the laws of England," meaning
 tract addressed to the king, entitled "A Pro-
 to his Majesty touching the Compiling and
 sent of the Laws of England." But this paper
 very heading is stated to be "By Sir Francis
 Knight, his Majesty's Attorney-General, and
 his Privy Council;" and it begins "Your
 of your favour, having made me privy councillor,
 inuing me in the place of your attorney-general,
 more than was three hundred years before," &c.
 s certain that Bacon was not sworn of the Privy
 till several years after this. On the meeting of
 nt in April, 1614, a question was started in the
 s as to the right of the attorney-general to sit

in that House, on the ground that he was only assistant to the House of Lords, on which, indeed, he was, and still is, summoned at the calling of every parliament to give his attendance. Bacon's predecessor, Hobart, had sat, but it was argued that he had made attorney general while he was a member of the House, whereas Bacon had been returned a member of the House while he was attorney-general. In point of fact Hobart's sitting had also been questioned at first, but after discussion it had been carried that the matter should be allowed to rest, and he is stated to have retained his seat "by connivance, without other order."* In this case, after a committee had been appointed to select precedents, and had made their report, it was determined that the attorney-general should remain for that parliament, but that no attorney-general should sit as a member in any future parliament. And, accordingly, no attorney general appears to have sat in the House of Commons from that time till after the Restoration.

About the same time that Bacon was made attorney general, there was introduced at court, and into the King's household, George Villiers, afterwards famous Duke of Buckingham, the all-powerful favourite of two reigns. Almost from the first he seems to have attached himself to Bacon, or, at least, to him, the understood if not expressed condition or purpose of their alliance being that Bacon should guide the young courtier by his advice, and that the latter, in return, employ his influence with the King to promote the professional advancement of his "guide, philosopher, and friend." There is printed in Bacon's works a letter, or treatise rather, entitled "Advice to Sir George Villiers, when he became favourite to King James," recommending many important instructions to govern himself in the station of prime minister, professing to have been written at the request of Villiers. It was to Villiers that Bacon applied to get himself made a privy councillor, which he was made on the

116. It must have been after this, therefore, wrote his "Proposition touching the Amendment of the Laws." On the resignation of the Lord Mor Egerton, Bacon was, on the 7th of March, made Lord Keeper of the Great Seal, on the 4th of May, 1618,* he was made Lord Chancellor; and on the 11th of July in the same year he was raised to the rank of Baron Verulam of Verulam in the county of Wilts. "About this time," says Mr. Montagu, "the King conferred upon him the valuable farm of the Exchequer Office, and he succeeded in obtaining for his London House." The first part of this statement seems to be taken from Rawley's account, who, enumerating his various offices and honours, makes a list of "other good gifts and bounties of the hand of his majesty gave him, both out of the Broad Seal, and of the Alienation Office, to the value in both, been hundred pounds per annum." Upon taking this, however, he had quitted not only his attorneyship, which it seems was worth 6000*l.* a year, but his office of Register of the Court of Star Chamber, which brought him about 1600*l.*, and another which he held of Chancellor to the Prince of

On the other hand he had many years before retired his father's estate of Gorhambury by the gift of his brother Anthony (about 1602); and this Rawley tells us, and other lands and possessions hereunto adjoining, amounting to a third part than his grants out of the Broad Seal and the Exchequer Office, he retained with the income derived from those grants to his dying day. As for York, he seems not to have established himself there until about the close of the year 1620. It must have been apparently on the 22nd of January, 1621, that the celebration of his birthday here took place which Ben Jonson has commemorated:—

which was in the 15th of James I., not the 16th, as we here makes it.

Hail, happy genius of this ancient pile !
 How comes it all things so about thee smile ?
 The fire, the wine, the merriment, and in the midst
 Thou stand'st as if some mystery thou didst !
 Pardon ! I read it in thy face, the day
 For whose returns, and many, all these pray .
 And so do I. This is the sixtieth year
 Since Bacon, and thy lord, was born, and here
 Son to the grave wise Keeper of the Seal,
 Fame and foundation of the English weal.
 What then his father was, that since is he,
 Now with a title more to the degree ;
 England's High Chancellor ; the destined heir
 To his soft cradle to his father's chair ;
 Whose even thread the Fates spin round and full
 Out of their choicest and their whitest wool."*

He had shortly before this published, in a volume, the most highly finished and the most celebrated of all his works, his '*Novum Organum Scientiarum* in two Books, forming the second part of his '*Instauratio Magna*.' We have in the *Resuscitatio* a letter from James to the author thanking him for a copy of his book just received, which is dated the 16th of October, 1621.

On the 27th of January, 1621 (five days after his birthday), not 1620, as Mr. Montagu has it. Bacon created Viscount St. Alban. On the 30th of the month the new parliament met, and on the 15th of March a committee of the House of Commons, which had been appointed to inquire into abuses in the administration of justice, reported that two charges of corruption had been brought against the lord chancellor. On the 24th of March Bacon presided in the House of Lords for the last time. Mr. Montagu continues to lag a year behind through all this. The charges of corruption having in the meantime accumulated to twenty-three, Bacon on the 24th

* Jonson's 70th *Underwood* ; in *Works*, by Gifford, 440, 441. 'The Biographia Britannica,' indeed, here uses these very lines to prove that the celebration must have place in January, 1620. But "This is the sixtieth year" must surely mean the same thing with,— "It is sixty since."

(Mr. Montagu says the 22nd) sent in his first plea and confession to the Lords by the hands of the Prince of Wales; and a second and more particular plea on the 30th of the same month. On the next day the seals were sequestered; and on Tuesday the 3rd of May, the Commons and their officers having appeared at the bar of the Lords and received judgment, the Lord Chief Justice, Sir James Wright, who had been commissioned to exercise for the time the office of Speaker in the House of Lords, pronounced sentence, to the effect, that the Viscount St. John, having been by his own confession found guilty, should be fined forty thousand pounds; and imprisoned in the Tower during the King's pleasure; that he should be forever incapable of any office, place, or employment in the state or commonwealth; and that he should never sit in parliament, nor come within the verge of court. Bacon was ill at this time, and he was not admitted to the Tower till the 31st, nor was he detained in confinement more than two days. The king also remitted him his fine; and he was soon after allowed to return to court. At last, he received a full pardon in the beginning of the year 1624. The common account, however, that he was again summoned to parliament in the next year of the next reign appears to be erroneous. On writing to the king on the 21st of April, 1621, in the height of the storm which threw him down, we find him thus concluding his letter—with more of strength of spirit, it will perhaps be thought, than of moral sensibility.—“Because he that hath taken bribes is apt to give more, I will go farther, and present your majesty with a new edition. For if your majesty give me peace and leisure, God give me life, I will present your majesty with a new History of England, and a better digest of your laws. And so, concluding with my prayers, I rest your majesty's afflicted but ever devoted servant.” He not only did not allow his fall either long to affect his spirits or to interrupt his studies. Before the end of the year he was ready with his ‘History of Henry VII.’ We learn from a letter of Sir Thomas Meautys, dated

the 7th of January, 1622, that it had already perused in manuscript by the king; and it was probably a few weeks or months after. On the March, also, we find him sending the king, not his promised digest of the laws, but "an offer," or proposition of such a work. In this same year composed his unfinished dialogue entitled 'An tisement touching an Holy War,' which he inscribed to Bishop Andrews; and he published the portion of his 'Historia Naturalis et Experimentalis' entitled 'De Ventis' (Of Winds), which is arranged as a portion of the Third Part of the *Instauratio Magna*. The next year, 1623, he published in Latin his work entitled 'De Dignitate et Augmentis Scientiarum' (on the Dignity and Advancement of the Sciences), in nine Books, which is regarded as forming the First Part of the *Instauratio Magna*; and also his 'Historia Vitae et Mortis' (Of Life and Death), arranged as another portion of the Third Part of that work. Various other writings in English and Latin, which he composed in his retirement, were not given to the world till after his death. In 1625, besides the new and greatly enlarged edition of his *Essays*, a very small 8vo. volume of 307 pages, with handsomely printed, entitled 'Aprophthegms, newly collected by the Right Honourable Francis Lord Viscount St. Alban,' once more gave public notice of the unabated activity of his mind.

Bacon's *Aprophthegms*, in this his own edition, numbered 280 in number; but a good many more have been added in subsequent impressions. Tenison, in the Introduction to the *Baconiana*, says: "His lordship hath suffered much injury by late editions, of which some have been enlarged, but not at all enriched, the collection; it with tales and sayings too insouciant for a place in a chimney corner." And he particularizes an edition published in 1669 with the title of "The *Aprophthegms* of King James, King Charles, the

was attributed to Bacon. In the second edition *Resuscitatio*, published by Rawley in 1661, Apophthegms are inserted, a few being new, but a few of those published by Bacon himself being included in the third edition of the same work, published in 1671, four years after Rawley's death, the number of Apophthegms is increased to 307 (of which, twelve are repetitions). But Tenison expressly declares that this latter is one of the editions in which Bacon was unfairly dealt with, and he declares that the additions were not made by Rawley. It is curious, therefore, that the publisher of the third edition of the *Resuscitatio* should affirm in an address to the reader, in the First Part (in which the Apophthegms are included) is an exact reprint of the preceding edition; and he also affirms, in another address, that all the Apophthegms in the Second Part were collected and left to the press by Rawley. Twenty-seven additional Apophthegms, which may be received as genuine, were added in the *Baconiana* published in 1679; and Mr. Monro states that there are "a few in Aubrey," by which I suppose is meant Aubrey's 'Lives,' published in 1701. 'Letters written by eminent persons in the sixteenth and eighteenth centuries,' 8vo. 1813. We receive, however, that he has given any of these in his edition of Bacon's Works. He has only reprinted in his first volume the 280 Apophthegms originally published by Bacon, together with the twenty-seven in the *Baconiana*, and in an appendix, twenty-eight more, under the title of Spurious Apophthegms, making altogether 307. The common editions, copying that of the *Resuscitatio* (4 vols. fol. 1730), give 362 in all; namely, after omitting the repetitions) published in the second edition of the *Resuscitatio*; thirty-nine described in the original edition in octavo, but omitted in the common copies; and the twenty-seven published in the *Baconiana* (of which last, however, three are omitted, as occurring in the same or nearly the same words in the *Essays*).

The apophthegms are introduced in the original edition by the following short preface : —

“Julius Cæsar did write a collection of apophthegms appears in an epistle of Cicero: I need say no more the worth of a writing of that nature. It is pity work is lost, for I imagine they were collected with judgment and choice; whereas that of Plutarch and Stobæus and much more the modern ones, draw much of the dirt. Certainly they are of excellent use. They are *much verborum*, pointed speeches. Cicero prettily calls them *salinus*, salt pits, that you may extract salt out of, sprinkle it where you will. They serve to be interlarded in continued speech. They serve to be recited, on occasions, of themselves. They serve, if you take the kernel of them and make them your own. I have for my recreation in my sickness, turned the old, omitting any because they are vulgar,* for many very ones are excellent good; nor for the meanness of person, but because they are dull and flat, and add many new, that otherwise would have died.”

The Apophthegms, or pointed sayings, thus collected by Bacon, are almost all good, very few at least of which published by himself can be pronounced unworthy of observation. Many of them had been previously in use of by him in his Essays and other writings, and repeated here for the most part nearly in the same words. Even with the aid he would thus have, however, we take the liberty of doubting Tenison's assertion that the 280 short stories, filling above 300 printed pages in the original small volume, and above 60 in one of Montagu's octavos, were all dictated by him in one sitting out of his memory. It is true that there are historical mistakes in some of them; but Bacon, as we have seen, does not himself plead the apology of haste, or of having written without resorting to books. May we then, it is evident, he had merely transcribed from his own previous writings.

The following are selected from the original 280.

* Generally current

Queen Elizabeth, the morrow of her coronation, went to parliament; and in the great chamber, Sir John Rainsforth, set his wiser men (a knight that had the liberty of a burgh), to let the queen alone—"That now this good time, when prisoners were delivered, four prisoners, amongst the rest, mought to have their liberty who were like enough to be kept held." The queen asked, "Who they were?" and he answered, "Matthew, Mark, Luke, and John, who had long been dumb in the Latin tongue, and now he desired they mought to speak among the people in English." The queen answered, with a grave countenance, "It were good, Rainsforth, they should be poken with themselves, to know of them whether they be set at liberty?"

Pace, the bitter fool, was not suffered to come at the queen because of his bitter humour. Yet at one time, some persuaded the queen that he should come to her, undertaking that he should keep compass: so he was brought to the queen and said: "Come on, Pace; now we shall hear thy faults." Smith Pace; "I do not use to talk of that that town talks on."

Queen Ann Bullen, at the time when she was led to be executed in the Tower, called one of the king's privy chamber and said to him, "Commend me to the king, and tell him that he is constant in his course of advancing me; from a gentlewoman he made me a marquise, and from a marquise a queen; and now, he had left no higher degree of earthly, but he hath made me a martyr."

Caesar Borgia, after long division between him and the lords of Romagna, fell to accord with them. In this treaty there was an article, that he should not call them at any time together in person. The meaning was, that knowing his treacherous nature, if he meant them treason; some one mought to revenge the rest. Nevertheless, he did with such fine craft and fair carriage win their confidence, that he brought them all together to council at Cinigagli, where he murdered them all in his act, which was related unto Pope Alexander, his uncle, by a cardinal, as a thing happy, but very perfidious; he said, "It was they that had broke their covenant first, and so they are all together."

Sir Thomas More had only daughters at the first, and his wife never prayd for a boy. At last he had a boy, which after, twelve years, proved simple. Sir Thomas said to his wife, "I prayd so long for a boy, that he will be a boy as long as he lives."

His ship was sailing, and there fell out a great tempest;

and the mariners, that were wicked and dissolute, were called upon the gods; but Bias said to them, "Peace, let not know you are here." *

38. Alcibiades came to Pericles, and stayed a while and was admitted. When he came in, Pericles civilly excused and said, "I was studying how to give my account." Alcibiades said to him, "If you will be ruled by me, rather how to give no account."

42. There was a bishop that was somewhat a delicate sou, and bathed twice a day. A friend of his said to "My lord, why do you bathe twice a day?" The bishop answered; "because I cannot conveniently bathe thrice." †

49. When Vespasian passed from Jewry to take upon the empire, he went by Alexandria, where remained two famous philosophers, Apollonius and Euphrates. The emperor took the discourse, touching the matter of state, in the present many. And when he was weary of them, he broke off, as a secret derision, finding their discourses but speculative, not put in practice, said, "O that I might govern wise men, wise men govern me."

58. The book of deposing King Richard the Second, and coming in of Henry the Fourth, supposed to be written by Doctor Hayward, who was committed to the Tower for it, much incensed Queen Elizabeth; and she asked Mr. Bacon, being then of her learned council, "Whether there were treason contained in it?" Mr. Bacon intending to do her pleasure, and to take off the queen's bitterness with a conceit, answered, "No, madam, for treason I cannot do opinion that there is any, but very much felony." The queen apprehending it gladly, asked, "How, and wherem?" Bacon answered, "Because he had stolen many of his sentences and conceits out of Cornelius Tacitus."

59. Mr. Popham, when he was speaker, and the lower house had sat long, and done in effect nothing; coming one day to Queen Elizabeth, she said to him, "Now, Mr. Speaker, what passed in the lower house?" He answered, "If it please your majesty, seven weeks."

63. Nero was wont to say of his master Seneca, "The style was like mortar of sand, without lime."

65. Queen Elizabeth being to resolve upon a great order, and being by some, that canvassed for others, put of some

* This is omitted in the *Resuscitation*.

† This is another of those omitted in the *Resuscitation*.

person whom she meant to advance, called for Mr. Bacon, and told him, "She was like one with a lantern seeking a man," and seemed unsatisfied in the choice she had of that place. Mr. Bacon answered her, "That he had that in old time there was usually painted on the church the day of doom, and God sitting in judgment, and St. Michael by him with a pair of balances; and the soul and the deeds in the one balance, and the faults and the evil deeds in the other; and the soul's balance went up far too light. But our lady painted with a great pair of beads, who cast into the light balance, and brought down the scale: so her place and authority, which were in her hands to give, were as lady's beads, which though men, through divers misfortune, were too light before, yet when they were cast in weight competent."

Queen Elizabeth was dilatory enough in suite, of her nature; and the lord treasurer Burleigh, to feed her humour, would say to her, "Madam, you do well to let suitors starve: I shall tell you, *les dat, qui cite dat*:" if you grant quickly, they will come again the sooner."

They feigned a tale of Sextus Quintus, that after his death he went to hell, and the porter of hell said to him, "You have reason to offer yourself to this place; but yet I have order to receive you: you have a place of your own, purgatory; say go thither." So he went away, and sought purgatory a while, and could find no such place. Whereupon he smarted, and went to heaven, and knocked; and St. Peter said, "Who was there?" he said, "Sextus Pope." Whereunto Peter said, "Why do you knock? you have the keys." He answered, "It is true, but it is so long since they were used, as I doubt the wards of the lock be altered."

The deputies of the reformed religion, after the massacre was upon St. Bartholomew's day, treated with the king's queen-mother, and some other of the council for a peace. Some were agreed upon the articles. The question was, the security of performance. After some particulars proposed and rejected, the queen-mother said, "Why, is not the word of a king sufficient security?" One of the deputies answered, "No, by St. Bartholomew, madam."

One was saying that his great grandfather, and grandfather, died at sea; said another that heard him, "I were as you, I would never come at sea." "Why," said

* *He gives twice who gives quick.*

he, "where did your great grandfather, and grandfather die?" He answered, "Where but in their beds?" the other, "And I were as you, I would never come in

91. There was a dispute, whether great heads or little had the better wit? And one said, "It must needs be little; for that it is a maxim, *omne majus continet in se minus*."

92. Solon, when he wept for his son's death, and came to him, "Weeping will not help," answered, "Alas, that I weep, because weeping will not help."

100. Trajan would say of the vain jealousy of princes, to seek to make away those that aspire to their succession; there was never king that did put to death his successor.

113. There was a marriage made between a widow of wealth and a gentleman of a great name, that had no other means. Jack Roberts said, "That marriage was like a black pudding; the one brought blood, and the other brought meat and oatmeal."*

125. Augustus Caesar would say; "That he was wiser than Alexander feared he should want work, having nothing to conquer; as if it were not as hard a matter to keep as to conquer."

131. The Romans, when they spake to the people, were wont to stile them ye Romans; when commanders in war spake to their army, they stiled them, my soldiers. There was a custom in Caesar's army, and somewhat the soldiers would have been that they would not declare themselves in it, but only demand a dismissal, or discharge, though with no intention it should be granted: but knowing that Caesar had at that time great need of their services, thought by that means to wrench from them their other desires: whereupon with one cry they asked Caesar, after silence made, said; "I for my part, ye Romans, will take this title did actually speak them to be dismissed: which they had no sooner heard, but they mutinied again; and would not suffer him to go on with his speech, until he had appeased them by the name of his soldiers: and so with that cry he appeased the sedition.

137. Diogenes begging, as divers philosophers then used, was more of a prodigal man than of the rest which were wont. Whereupon one said to him; "See your baseness, that will find a liberal mind, you will take most of him." "No," answered Diogenes, "but I mean to beg of the rest again."

139. Jason the Thessalian was wont to say, "that

* This is omitted in the Resuscitatio

must be done unjustly, that many things may be done.

Sir Nicholas Bacon being keeper of the seal, when Elizabeth, in progress, came to his house at Redgrave, said to him, "My lo', what a little house you have gotten?" Madam, my house is well, but it is you that have made great for my house."

Croesus said to Cambyaes, "That peace was better war; because in peace the sons did bury their fathers, but war the fathers did bury their sons."*

Philip, Alexander's father, gave sentence against a man at what time he was drowsy, and seemed to give small heed. The prisoner, after sentence was pronounced, said, "I appeal." The king, somewhat stirred, said, "To whom do you appeal?" The prisoner answered, "From Philip when he shall give ear, to Philip when he shall give ear."

The same Philip maintained arguments with a musician on points of his art, somewhat peremptorily, but the musician said to him, "God forbid, sir, your fortune were so great you should know these things better than myself."

Cato Major would say, "That wise men learnt more of fools, than fools of wise men."

When it was said to Anaxagoras, "The Athenians have condemned you to die:" he said again, "And Nature

One of the seven was wont to say, "That laws were made for the small flies; where the small flies were caught, and the great brought."

There was a law made by the Romans against the bribery and extortion of the governors of provinces. Cicero made a speech of his to the people, "That he thought the people would petition to the state of Rome to have that law repealed. For," saith he, "before the governors did bribe and extort as much as was sufficient for themselves; but now they extort as much as may be enough not only for themselves but for the judges, and jurors, and magistrates."

Pyrrhus, when his friends congratulated to him his victory over the Romans, under the conduct of Fabricius, but at the slaughter of his own side, said to them again, "Yes, we have such another victory, we are undone."

Cicero was an excellent orator and statesman, and a close friend and counsellor to Pyrrhus; and falling in in-

* This was omitted in the *Resuscitatio*.

ward talk with him, and discerning the king's endless ambition, Pyrrhus opened himself unto him, that he intended war upon Italy, and hoped to achieve it; Cineas asked, "Sir, what will you do then?" "Then," said he, "we will tempt Sicily." Cineas said, "Well, sir, what then?" Pyrrhus, "If the gods favour us, we may conquer Africa, Carthage." "What then, Sir," said Cineas. "Nay, then," Pyrrhus, "we may take our rest, and sacrifice and feast a day, and make merry with our friends." "Alas, sir," Cineas, "may we not do so now, without all this ado?"

199. Themistocles said of speech, "That it was like a that spread abroad shews fair images, but contracted is like packs."*

200. Bresquet, jester to Francis I. of France, did his calendar of fools, wherewith he did use to make the sport, telling him ever the reason why he put any one in his calendar. When Charles V., emperor, upon confidence in the noble nature of Francis, passed through France, for the peasing of the rebellion of Gaunt, Bresquet put him in his calendar. The king asked him the cause. He answered, "Because you have suffered at the hands of Charles the great bitterness that ever prince did from another, nevertheless would trust his person into your hands." "Why, Bresquet," said the king, "what wilt thou say, if thou seest him pass in as great safety, as if he marched through the midst of Spain?" Saith Bresquet, "Why, then, I will put him in, and put you in."

203. When peace was renewed with the French, in England, divers of the great councillors were presented from France with jewels: the Lord Henry Howard, being then of Northampton, and a councillor, was omitted. When the king said to him, "My lord, how happens it that you are not a jewel as well as the rest?" My lord answered according to the fable in Æsop; "Non sum Gallus, itaque non gemmam."†

206. Cosmos duke of Florence was wont to say of treacherous friends, "that we read, that we ought to forgive our enemies; but we do not read that we ought to forgive our friends."

210. There was a politic sermon that had no divinity.

* This was omitted in the *Resuscitatio*.

† I am not a cock [the word signifies also a Gall or Frenchman], therefore I have found no precious stone.

preached before the king. The king, as he came forth, Bishop Andrews, 'Call you this a sermon?' The bishop said, "And it please your majesty, by a charitable countenance, it may be a sermon."*

The Lady Paget, that was very private with Queen Elizabeth, declared herself much against her match with Monsieur. After Monsieur's death, the queen took extreme grief, so she made show, and kept within her bed-chamber and ante-chamber for three weeks' space, in token of mourning.

But she came forth into her privy-chamber, and admitted ladies to have access to her, and amongst the rest Lady Paget presented herself with a smiling countenance.

Elizabeth bent her brows, and seemed to be highly displeased, and said to her, "Madam, you are not ignorant of my extreme grief; do you come to me with a countenance of joy?"

Lady Paget answered, "Alas! and may it please your majesty, it is impossible for me to be absent from you for three weeks; but that when I see you, I must look cheerfully." "No," said the queen, not forgetting her former averseness to the match.

"You have some other conceit in it, tell me plainly." Lady Paget answered, "I must obey you: it is thus. I was

how happy your majesty was, in that you married not me; for seeing you take such thought for his death, not your friend; if he had been your husband, sure it would have cost you your life."

Sir Edward Dyer, a grave and wise gentleman, did believe in Kelly the alchemist, that he did indeed the thing and made gold; insomuch that he went into Germany, Kelly then was, to inform himself more fully thereof.

On his return, he dined with my Lord of Canterbury, where beside him was at the table Dr. Brown the physician. They fell to talk of Kelly. Sir Edward Dyer turning to the archbishop said,

"I beseech your grace, that that I shall tell you is truth, I am an enemy thereof; and if I had not seen it, I should not have believed it. I saw Master Kelly put of the base metal into the furnace;

and after it sat a little upon the fire, and a very small quantity of the medicine put in, and stirred with a stick of wood, forth in great proportion, perfect gold; to the touch, to the trial, to the test."

My lord archbishop said, "You had need believe of what you say, Sir Edward Dyer, for here is an assay on the board." Sir Edward Dyer said again pleasantly, "I

* This was omitted in the *Resuscitation*.

would have looked for an infidel sooner in any place than your grace's table." "What say you, Dr. Brown?" said the bishop. Dr. Brown answered, after his blunt and homely manner "The gentleman hath spoken enough for me." "What saith the bishop," "what hath he said?" "Marry," said Dr. Brown, "he said, he would not have believed it, except he had seen it, and no more will I."

273. Dr. Land said, "That some hypocrites and some mortified men, that held down their heads like bulrushes like the little images that they place in the very bowing vaults of churches, that look as if they held up the ceiling but are but puppets."

The following are from the small additional notes published by Tenison in the *Baconiana*, which may also be confidently received as genuine.—

5. Queen Elizabeth seeing Sir Edward in her garden looked out at her window, and asked him in Italian, "What doth a man think of when he thinks of nothing?" Sir Edward had not had the effect of some of the queen's grants so far as he had hoped and desired, paused a little; and then answered, "Madam, he thinks of a woman's promise." The queen shrunk in her head; but was heard to say, "Well, Sir Edward, I must not confute you." Anger makes dull men witty, but keeps them poor.

25. The Lord Bacon was wont to commend the advice of the plain old man at Buxton, that sold besoms; a young fellow came to him for a besom upon trust; to which the old man said, "Friend, hast thou no money? borrow a little back, and borrow of thy belly, they'll ne'er ask thee again, but shall be dunning thee every day."

27. Jack Weeks said of a great man, just then dead, who pretended to some religion, but was none of the best. "Well, I hope he is in heaven. Every man thinks as he is, but if he be in heaven, 't were pity it were known."

Bacon's own arrangement of the *Apophthegmata* quite changed in the *Resuscitatio*, it is not very easy to ascertain all the omissions and additions; but as the original 280 are stated to have been left out, and the entire number (without counting repetitions) in the edition of the *Resuscitatio* is 295, it follows that there must be 54 in that which are not in Bacon's own.

1. Mr. Montagu, without intimating that there are more, gives 28 of them in a note under the title of curious Apophthegms.' Even of these, however, a may possibly be genuine; and at any rate two or three are worth transcribing: —

2. A great officer at court, when my Lord of Essex was in trouble, and he and those that dealt for him would much of my lord's friends and of his enemies, answered one of them, "I will tell you, I know but one friend and one my my lord hath; and that one friend is the queen, and one enemy is himself."

4. My Lord of Leicester, favourite to Queen Elizabeth, making a large chace about Cornbury Park, meaning to lose it with posts and rails, and one day was casting up his charge what it would come to, Mr. Goldingham, a free-ken man, stood by, and said to my lord, "Methinks your shipgoeth not the cheapest way to work." "Why, Goldingham?" said my lord. "Marry, my lord," said Goldingham, "want you but upon the posts, for the country will find you railing."

10. A notorious rogue, being brought to the bar, and knowing his case to be desperate, instead of pleading, he took to himself the liberty of jesting, and thus said, "I charge you in king's name, to seize and take away that man (meaning judge) in the red gown, for I go in danger because of him."

16. When my Lord President of the Council was newly raised to the Great Seal, Gondamar came to visit him; my lord said, "That he was to thank God and the king for that our; but yet, so he might be rid of the burthen, he would willingly forbear the honour. And that he formerly had a hare, and the same continued with him still, to lead a private life." Gondamar answered that he would tell him a tale "Of an old rat that would needs leave the world: and acquainted young rats that he would retire into his hole and spend his days solitarily; and would enjoy no more comfort: and he commanded them, upon his high displeasure, not to offer to be in unto him. They forbore two or three days; at last, that was more hardy than the rest, incited some of his fellows to go in with him, and he would venture to see how his master did; for he might be dead. They went in, and found the old rat sitting in the midst of a rich Parmesan cheese." So he applied the fable after his witty manner.

The remaining pieces included under the head 'Moral Works' in the common editions of Bacon's writings, are only the collection of sentences called '*Ornamenta Rationalia*;' and the '*Short Notes on Civil Conversation*.'

The *Ornamenta Rationalia* were first published by Tenison in the *Baconiana* (1679). In his Introduction he informs us that Bacon "also gave to those good and polite sayings the title of *Sententie Stellæ* either because they were sentences which deserved to be pointed to by an asterisk in the margin; or because they much illustrated and beautified a discourse in which they were disposed in due place and order: as the stars in the firmament are so many glorious ornaments which set off with their lustre the wider and less adorned spaces." But the collection as originally made by Bacon had not come to Tenison's hands: it is, he proceeds, "either wholly lost or thrown into some obscure corner, but I fear the first. I have now three catalogues in the hands of the unpublished papers of Sir Francis Bacon, written by Dr Rawley himself. In every one of them appears the title of *Ornamenta Rationalia*; but in the bundles which came with those catalogues, there is not one of those *Sentences* to be found. I held myself obliged, in some sort and as I was able, to supply the defect; it being once in my power to have presented this paper. For a copy of it was long since sent to me by that doctor's only son, and my dear friend (now with God), Mr. William Rawley; of whom, if I am no more, it is the greatness of my grief for that irreparable loss which causeth my silence. I was then negligent in taking a copy, presuming I might at any occasion command the original, and because they were then in such good hands. Now there remains not with me but a general remembrance of the quality of the collection. It consisted of divers short sayings, aptly and smartly expressed, and containing in them much of sense in a little room. These he either made or gathered from others, being moved so to do by the same reason which caused him to gather together his *Apophtegms*.

The original collection, it is afterwards added, "we (as I remember) gathered partly out of his own store and partly from the antients; and accordingly 'tis supplied out of his own works and the *Mimi* of *Publius*. *Publius* is *Publius Syrus* (or the Syrian), the Mimographer, who flourished at Rome in the half century immediately preceding our era, and from whose lost *Mimi*, or *Mimes*, about a thousand pregnant or pithy remarks have been preserved, and often printed. Of these *Tenison* has selected 36, to supply the loss of those collected by *Bacon*. And to these he has added 78 sentences collected out of *Bacon's* own writings, mostly from the *Essays*. The title '*Ornamenta Rationalia*' comprehends both these collections, and not only the first of them, as it is made to do by *Mr. Montagu*, and in all the common editions of *Bacon's* works.

The '*Short Notes for Civil Conversation*' are taken with the *Essay on Death* already mentioned, from the *Remains*, published in 1648. They consist of only nine short paragraphs or observations, of which the following is the third:—

In all kinds of speech, either pleasant, grave, severe, or ordinary, it is convenient to speak leisurely, and rather drawingly than hastily; because hasty speech confounds the memory and oftentimes, besides unseemliness, drives a man either to surplus or unseemly stammering, harping upon that which should follow; whereas a slow speech confirmeth the memory [and] addeth a conceit of wisdom to the hearers, besides seemliness of speech and countenance.

SECTION IV.

THE THEOLOGICAL WORKS.

OF what are called Bacon's Theological writings first published, as far as is known, are his *Meditationes Sacrae*, or *Religious Meditations*, which we have both in Latin and in English; the Latin copy having appeared as already mentioned, along with the *Essays* as published in 1597; the English, with the second edition of the *Essays*, dated 1598. They were probably originally written in Latin; but the English version may be Bacon's own. The Latin title is preserved in the original editions.

The *Meditationes Sacrae* are twelve short compositions of the same kind with the other *Essays*, except that they are on religious subjects. When the *Essays* were extended in the later editions, many things that were taken from the *Meditationes Sacrae*, which were withdrawn from all the editions after that of 1606. One or two of the new *Essays* are indeed almost the same with what had previously appeared as *Meditationes*. Other thoughts originally published under that title afterwards transferred to the *Advancement of Learning*.

The titles of the *Meditations* are, 1. Of the Works of God and Man; 2. Of the Miracles of our Saviour; 3. Of the Innocency of the Dove, and the Wisdom of the Serpent; 4. Of the Exaltation of Charity; 5. Of the Moderation of Cares; 6. Of Earthly Hope; 7. Of Hypocrites; 8. Of Impostors; 9. Of the several kinds of Imposture; 10. Of Atheism; 11. Of the Miracles of the Church; 12. Of the Church and the Scripture. Each begins with or is headed by a text of Scripture, which it is in fact a brief comment, generally very ingenious, and either propounding a new interpretation of words, or setting the subject in a peculiar and

light. Here is the Fourth, "Of the Exaltation of Charity:"—

"*If I have rejoiced at the overthrow of him that hated me, and took pleasure when adversity did befall him.*"—The detection or renouncing of Jot. For a man to love again where he is loved, it is the charity of publicans contracted by mutual profit and good offices; but to love a man's enemies is one of the containingest points of the law of Christ, and an imitation of the divine nature. But yet again, of this charity there be divers degrees, whereof the first is to pardon our enemies when they repent, of which charity there is a shadow and image even in noble beasts; for of lions it is a received opinion that their fury and fierceness ceaseth towards anything that yieldeth and prostrateth itself. The second degree is to pardon our enemies though they persist, and without satisfactions and admissions. The third degree is not only to pardon and forgive, and forbear our enemies, but to deserve well of them and do them good. But all these three degrees either have or may have in them a certain bravery and greatness of the mind rather than pure charity; for when a man perceiveth virtue to proceed and flow from himself, it is possible that he is puffed up, and takes contentment rather in the fruit of his own virtue than in the good of his neighbours; but if any evil overtake the enemy from any other coast than from thyself, and thou in the inwardest motives of thy Heart be grieved and compassionate, and dost no ways insult as if thy days of right and revenge were at last come, thus I interpret to be the height and exaltation of Charity.

The Fifth, "Of the Moderation (the moderating or restraining) of Cares," is as follows.—

"*Sufficient for the day is the evil thereof.*"—There ought to be a measure in worldly cares, otherwise they are both unprofitable, as those which oppress the mind and astonish the judgment, and prophane, as those which savour of a mind which promiseth to itself a certain perpetuity in the things of this world, for we ought to be day's men, and not to-morrow's men, considering the shortness of our time; and as he saith, "Laying hold on the present day;" for future things shall in their turns become presents, therefore the care of the present sufficeth. And yet moderate cares (whether they concern particular or common wealth, or our friends) are not blame-

But herem is a twofold excess; the one when the chain or thread of our cares is extended and spun out to an over great length, and unto times too far off, as if we could bind the divine Providence by our provisions, which, even with the heathen, was always found to be a thing insolent and un lucky; for those which did attribute much to fortune, and were ready at hand to apprehend with alacrity the present occasions, have for the most part in their actions been happy; but they who in compass wisdom have entered into a confidence that they have delayed all events, have for the most part encountered misfortune. The second excess is when we dwell longer in our cares than is requisite for due deliberating or firm resolving; for who is there amongst us that careth no more than suffice either to resolve of a course or to conclude upon an impossibility, and doth not still chew over the same things, and tread in a maze in the same thoughts, and vanisheth in them without issue or conclusion. Which kind of cares are most contrary to all divine and human respects.

And here is the Sixth, "Of Earthly Hope."--

"*Better is the sight of the eye, than the apprehension of the mind.*"--Pure sense, receiving everything according to the natural impression, makes a better state and government of the mind, than these same imaginations and apprehensions of the mind; for the mind of man hath this nature and property even in the gravest and most settled wits, that from the sense of every particular, it doth as it were bound and spring forward, and take hold of other matters, foretelling unto itself that which shall prove like unto that which beateth upon the present sense, if the sense be of good, it easily runs into an unlimited hope, and into a like fear when the sense is of evil, according as is said

"The oracle of hopes doth oft abuse."

And that contrary,

"A froward soothsayer is fear in doubts."

But yet of fear there may be made some use, for it prepa-
reth patience and awaketh industry:

"No shape of ill comes new or strange to me,
All sorts set down, yea, and prepared be."

But hope seemeth a thing altogether unprofitable; for
what end serveth this conceit of good? Consider and note

if the good fall out less than thou hopest; good though yet less because it is, it seemeth rather loss than benefit by thy excess of hope. If the good prove equal and probable in event to thy hope, yet the flower thereof by thy gathering, so as when it comes the grace of it is gone, it seems used, and therefore sooner draweth on satiety. If thy success prove better than thy hope, it is true a gain to be made: but had it not been better to have gained principally by hoping for nothing, than the increase by hoping for less; and this is the operation of hope in good fortune; but in misfortunes it weakeneth all force and vigour of mind; for neither is there always matter of hope, and if it be, yet if it fail but in part, it doth wholly overthrow the industry and resolution of the mind; and besides, though it carry us through, yet it is a greater dignity of mind to rely on evils by fortitude and judgment, than by a kind of abnegation and alienation of the mind from things present to things future; for that it is to hope. And therefore it was much less in the poets to fain hope to be as a counter-poison of their diseases, as to mitigate and assuage the fury and anger of them, whereas indeed it doth kindle and enrage them, and hath both doubling of them and relapses. Notwithstanding that the greatest number of men give themselves over to imaginations of hope and apprehensions of the mind in misfortune, that ungrateful towards things past, and in a manner forgetful of things present, as if they were ever children and beginners, they are still in longing for things to come. "I saw one walking under the sun, resort and gather to the second day, which was afterwards to succeed: this is an evil day, and a great idleness of the mind."

perhaps you will ask the question, whether it be not better when things stand in doubtful terms, to preserve the mind rather hope well than distrust; specially seeing that both cause a greater tranquillity of mind?

ely I do judge a state of mind which in all doubtful occasions is settled and floateth not, and doth this out of a government and composition of the affections, to be one of the principal supporters of man's life: but that assurance and repose of the mind, which only rides at anchor upon hope, is subject as wavering and weak. Not that it is not content to foresee and pre-suppose out of a sound and sober nature, as well the good as the evil, that thereby we may regulate our actions to the probabilities and likelihoods of their issue, so that this be a work of the understanding and judg-

ment, with a due bent and inclination of the affection, which of you hath so kept his hopes within limits, as will so that you have out of a watchful and strong discouragement set down the better success to be in apparency the likely; you have not dwelt upon the very muse and thought of the good to come, and giving scope and unto your mind to fall into such cogitations as into a pipe dream? And this it is which makes the mind light, unequal, and wandering. Wherefore all our hope is bestowed upon the heavenly life to come: but here on earth purer our sense is from the infection and tincture of imagination, the better and wiser soul.

"The sum of life to little doth amount,
And therefore doth forbid a longer count."

The Eighth, "Of Impostors," is very short:—

"Whether we be transported in mind, it is to God or whether we be sober, it is to youward."—This is the image and true temper of a man, and of him that is faithful workman, his carriage and conversation towards is full of passion, of zeal, and of trammises; thence groans unspeakable, and exultings likewise in comfort, ment of spirit, and agonies; but contrariwise, his carriage conversation towards men is full of mildness, sobriety, applicable demeanour. Hence is that saying, "I am to all things to all men," and such like. Contrary it is hypocrites and impostors, for they in the church and the people set themselves on fire, and are carried as it were of themselves, and becoming as men inspired with holy they set heaven and earth together; but if a man did so solitary and separate meditations and conversation, where God is only privy, he might, towards God, find them not cold and without virtue, but also full of ill nature and *"Sober enough to God, and transported only towards men."*

We add the Tenth, "Of Atheism," as an example of the manner in which parts of these Meditations afterwards worked up into Essays. The reader compare the following with the Sixteenth Essay, has the same title:—

"The fool hath said in his heart there is no God."—it is to be noted, the Scripture saith, "The fool hath

heart," and not "thought in his heart;" that is to say, he doth not so fully think it in judgment, as he hath a good will to be of that belief, for seeing it makes not for him that there should be a God, he doth seek by all means accordingly to persuade and resolve himself, and studies to affirm, prove, and justify it to himself as some theme or position: all which notwithstanding, that sparkle of our creation light whereby men acknowledge a Deity burneth still within, and again doth he strive utterly to alienate it or put it out, so that it is out of the corruption of his heart and will, and not out of the natural apprehension of his brain and conceit, that he doth set down his opinion, as the comical poet saith, "Then came my mind to be of mine opinion," as if himself and his mind had been two divers things; therefore the atheist hath rather said, and held in his heart, than thought or believed in his heart that there is no God. Secondly, it is to be observed, that he hath said in his heart, and not spoken it with his mouth. But again you shall note, this smothering of this persuasion within the heart cometh to pass for fear of government and of speech amongst men; for as he saith, "To deny God in a public argument were much, but in a familiar conference were current enough." for if this bridle were removed, there is no frenzy which would contend more to spread and multiply, and disseminate itself abroad, than atheism: neither shall you see those men which are drenched in this frenzy of mind to breathe most anything else, or to inculcate even without occasion anything more than speech tending to atheism, as may appear in Lucretius the Epicure, who makes of his invectives against religion as it were a further or verse of return to all his other discourses; the reason see us to be, for that the atheist not relying sufficiently upon himself, floating in mind and unsatisfied, and enduring within many failings, and as it were failing his opinion, desires, by other men's opinions agreeing with his, to be recovered and brought again; for it is a true saying, "Whoso laboreth earnestly to prove an opinion to another, himself mistrusts it." Thirdly, it is a fool that hath so said in his heart, which is most true; not only in respect that he hath no taste in those things which are supernatural and divine, but in respect of human and civil wisdom. For first of all, if you mark the wits and dispositions which are inclined to atheism, you shall find them light, scoffing, impudent, and vain, lastly, of such a constitution as is most contrary to wisdom and moral gravity. Secondly, amongst statesmen and politicians, those which have been of greatest depth and compass

and of largest and most universal understanding, have only in cunning made their profit in seeming religious to people, but in truth have been touched with an inward secret of the knowledge of Deity, as they which you shall evermore note to have attributed much to fortune and providence. Contrariwise, those who ascribed all things to their own cunning and practices, and to the immediate and apparent causes, as the prophet said, "Have sacrificed to their own nets," have been always but petty counterfeit statesmen, and not capable of the greatest actions. Lastly, thus I dare affirm in knowledge of nature, that a little natural philosophy, and the entrance into it, doth dispose the opinion to atheism; but the other side, much natural philosophy and wading deep in it will bring about men's minds to religion. Whereof atheism every way seems to be joined and combined with folly and ignorance, seeing nothing can be more justly allotted to be the saying of fools than this, *There is no God.*

The following is the Twelfth Meditation, "Of the Church and the Scriptures:"—

"Thou shalt protect them in thy tabernacle from the contradiction of tongues"—The contradiction of tongues do everywhere meet with us out of the tabernacle of God, therefore whithersoever thou shalt turn thyself thou shalt find end of controversies, except thou withdraw thyself into the tabernacle. Thou wilt say it is true, and that it is to be understood of the unity of the church. But Lear and not There was in the tabernacle the ark, and in the ark the testimony or tables of the law: what dost thou tell me of the heart of the tabernacle without the kernel of the testimony? The tabernacle was ordained for the keeping and delivering of from hand to hand of the testimony. In like manner, the custody and passing over of the Scriptures is committed to the Church, but the life of the tabernacle is the testimony.

The most considerable of Bacon's theological writings are his pieces entitled "An Advertisement touching the Controversies of the Church of England," and "Certain Considerations touching the better Pacification and Education of the Church of England." In his Life (see Mr. Montagu tells us that he produced these "publications" both in the same year 1606. But it

clear from the discourses themselves that the one was written a long time before the other. They appear to have been first published in 1640 or 1641. There is a copy of the "Considerations" in the British Museum in small quarto with the date 1640; and in one of the volumes of the King's Pamphlets, preserved in the same collection, is a copy, in the same size, of the "Advertisement," with the title of "A Wise and Moderate Discourse concerning Church Affairs; as it was written long since by the famous author of those Considerations which seem to have some reference to this; now published for the common good; imprinted in the year 1641." This description would seem to imply that the "Considerations" had been originally prefixed; and it will be found on examining the pamphlet that the beginning is evidently wanting, for the above title, besides this it is not in capitals as if it were intended to stand at the commencement of the publication, is printed not on the first but on the second leaf of the sheet. The Discourses which it heads had probably been added to a second edition of the "Considerations;" and it would not appear to have been published anonymously, as Blackbur and Mr. Montagu assert. There are MS. copies in the Museum both of the Advertisement and the Considerations; of the latter at least more than one copy. Both tracts were afterwards authenticated by being inserted by Dr. Rawley in the *Resuscitatio* (1657); and they may be considered to be alluded to in the following paragraph of the Preface to that collection:—"It is true that, for some of the pieces herein contained, his lordship did not sit at the publication of them, but at the preservation only, and prohibiting them from perishing; so as they have been reposed in some private shrine or library. But now, for that, through the loose keeping of his lordship's papers whilst he lived, divers surreptitious copies have been taken, which have since employed the press with sundry corrupt and mangled editions, whereof nothing hath been more difficult than to find the Lord Saint Alban in the Lord Saint Alban, and which have presented (*some of them*) rather a fardle of nonsense

than any true expressions of his lordship's happy vein. I thought myself, in a sort, tied to vindicate these injuries and wrongs done to the monuments of his lordship's pen, and at once, by setting forth the true and genuine writings themselves, to prevent the like evasion for the time to come."

The Considerations appear to have been addressed to King James very soon after his accession;* and the author there speaks of having long held the same opinions, "as may appear," he adds, "by that which have many years since written of them, according to the proportion nevertheless of my weakness." There can hardly be a doubt that these words refer to the Advertisement, which must therefore have been written long before the end of the reign of Elizabeth. The manner in which it is spoken of might very well be taken to carry it back to 1590, when Bacon was only about thirty; but even if we should assign it to a date two or three years later, it would still be his earliest known composition. It is a very able and striking discourse, remarkable both for the writing and for the thought or reasoning, and curious for a display of theological learning, a familiarity with the original authorities in that department of scholarship, which in our degenerate day would be thought to do honour to a bishop, and which we might safely defy the united force of all the inns of court to match. It commences thus:—

It is but ignorance, if any man find it strange, that the state of religion, especially in the days of peace, should be exercised and troubled with controversies: for as it is the condition of the Church militant to be ever under trials, so it cometh to pass, that when the fiery trial of persecution ceaseth, there succeedeth another trial, which, as it were, by contrary blasts of doctrine, doth sift and winnow men's faith, and proveth whether they know God aright; even as that other of afflictions dis-

* The heading of a copy in Ayscough MS. 4263, describes them as "dedicated to his Most Excellent Majesty at his first coming in:" (the last five words, however, being in a different hand from the rest of the title).

worth whether they have him better than the world. Accordingly was it foretold by Christ, saying, "that in the later times it should be said, Lo here, lo there is Christ:" which is to be understood, not as if the very person of Christ should be assumed and counterfeited, but his authority and pre-eminence, which is to be the truth itself, should be challenged and pretended. Thus have we read and seen to be fulfilled that which followeth, "*Eccce in deserto, ecce in penetralibus*:"* while some have sought the truth in the conventicles and conciliables of heretics and sectaries; others in the external face and representation of the Church; and both sorts have been seduced. Were it then that the controversies of the Church of England were such, as they did divide the unity of the spirit, and not only such as do unwathe her of her bands, the bands of peace, yet could it be no occasion for any pretended Catholic to judge us, or for any irreligious person to despise us; or if it be, it shall but happen to us all as it hath used to do; to them to be hardened and to us to endure the good pleasure of God. But now that our contentions are such, as we need not so much that general censure and sentence of Christ pronounced against heretics "*Erratis, nescientes Scripturas, et potestatem Dei*;" you do err, not knowing the Scripture and the power of God: as we need the admonition of St. James, "Let every man be swift to hear, slow to speak, slow to wrath;" and that the wound is no way dangerous, except we poison it with our remedies: as the former sort of men have less reason to make themselves music in our discord, so I have good hope that nothing shall displease ourselves, which shall be sincerely and modestly propounded for the appeasing of these dissensions, for if any shall be offended at this voice, "*Vos estis fratres*;" ye are brethren, why strive ye, he shall give great presumption against himself, that he is the party that doth his brethren wrong.

The controversies themselves I will not enter into, as judging that the disease requireth rather rest than any other cure. Thus much we all know and confess, that they be not of the highest nature, for they are not touching the high mysteries of faith, such as detained the churches for many years after their first peace, what time the heretics moved curious questions, and made strange anatomies of the natures and person of Christ, and the catholic fathers were compelled to follow them with all subtlety of decisions and determinations to exclude them.

* Behold he is *in the desert*; behold he is *in the secret chambers of the house*.

from their evasions, and to take them in their labyrinths; as it is rightly said, "*illa temporibus, ingeniosa res fuit, Christianum;*" in those days it was an ingenious and subtle thing to be a Christian.

Neither are they concerning the great parts of the word of God, of which it is true, that "*non servatur unitas in credendo, nisi eadem adsit in colendo;*" there will be kept unity in believing, except it be entertained in worshipping; so as were the controversies of the east and west churches touching images, and such as are many of those between the church of Rome and us; as about the adoration of the sacrament, and the like; but we contend about ceremonies and things indifferent, about the external policy and government of the church in which kind, if we could but remember that the ancient and true bonds of unity are "*one faith, one baptism,*" and not ceremony, one policy; if we would observe the league among Christians, that is penned by our Saviour, "*he that is not against us is with us;*" if we could but comprehend that saying, "*differentiæ rituum commendant unitatem doctrinæ;*" the diversities of ceremonies do set forth the unity of doctrine; and "*habet religio quæ sunt æternitatis, habet quæ sunt temporis;*" religion hath parts which belong to eternity, and parts which pertain to time: and if we did but know the virtue of silence and slowness to speak, commended by St. James, our controversies of themselves would close up and grow together: but more especially, if we would leave the over-weening and turbulent humours of these times, and revive the blessed proceeding of the Apostles and fathers of the primitive church, which was the like and greater cases, not to enter into assertions and positions, but to deliver counsel and advices, we should need no other remedy at all. "*si eadem consulas, frater, quæ affirmas consalenti deletur reverentia, cum non debeatur fides assertanti;*" brother, if that which you set down as an assertion, you would deliver by way of advice, there were reverence due to your counsel, whereas faith is not due to your affirmation. St. Paul was content to speak thus, "*Ego, non Dominus,*" and not the Lord: "*Et secundum consilium meum;*" according to my counsel. But now men do too lightly say, "*Non ego, sed Dominus,*" Not I, but the Lord: yea, and bind it with a heavy denunciation of his judgments, to terrify the simple which have not sufficiently understood out of Solomon, "*the causeless curse shall not come.*"

A wish is then expressed that "*there were an end and surcease made of this immodest and deformed way*"

er of writing lately entertained, whereby matter of religion is handled in the style of the stage"—in evident allusion to the Martin Mar-Prelate controversy, which began in 1589, a circumstance which may help to settle the date of the discourse.

To leave all reverent and religious compassion towards evils, or indignation towards faults, and to turn religion into a comedy or satire; to search and rip up wounds with a laughing countenance, to intermix Scripture and scurrility sometimes in one sentence, is a thing far from the devout reverence of a Christian, and scant becoming the honest regard of a sober man: "Non est major confusio, quam serii et joci;" there is no greater confusion than the confounding of jest and earnest. The majesty of religion, and the contempt and deformity of things ridiculous, are things as distant as things may be. Two principal causes have I ever known of atheism; curious controversies and profane scoffing. now that these two are joined in one, no doubt that sect will make no small progression.

Bacon objects, however, to the vain policy of attempting to suppress the Puritan or anti-hierarchical pamphlets.

And indeed we see it ever falleth out, that the forbidden writing is always thought to be certain sparks of truth that fly up into the faces of those that seek to choke it, and tread it out; whereas a book authorized is thought to be but "*temporis voces*," the language of the time. But in plain truth I do find, to mine understanding these pamphlets as meet to be suppressed as the other. First, because as the former sort deface the government of the Church in the persons of the bishops and prelates, so the other doth lead into contempt the exercises of religion in the persons of sundry preachers; so as it di grace an higher matter, though in the meaner person.

And he concludes this part of his subject as follows:—

As it were to be wished that these writings had been abortive, and never seen the sun; so the next is, since they be come abroad, that they be censured, by all that have understanding and conscience, as the intemperate extravagancies of some light persons. Yea farther, that men beware, except they mean to adventure to deprive themselves of all sense of religion, and to pave their own hearts, and make them as the

highway, how they may be conversant in them, and more how they delight in that vein; but rather to turn laughing into blushing, and to be ashamed, as of a shortness, that they have in matters of religion taken the road and solace. But this, perchance, is of these faults which will be soonest acknowledged; though I perceive, nevertheless, that there want not some who seek to blanch and excuse.

He then proceeds:—

But to descend to a sincere view and consideration of accidents and circumstances of these controversies, whether either part deserveth blame or imputation, I find general causes of Church matters, that men do offend in some or in these five points.

The first is, the giving occasion unto the controversies; also the inconsiderate and ungrounded taking of occasion.

The next is, the extending and multiplying the controversies to a more general opposition or contradiction than appeareth at the first propounding of them, when men's judgments are least partial.

The third is, the passionate and unbrotherly practices and proceedings of both parts towards the persons each of other for their discredit and suppression.

The fourth is, the courses bolden and entertained on either side, for the drawing of their partisans to a more straightness within themselves, which ever importeth a farther distraction of the entire body.

The last is, the undue and inconvenient propounding, pushing and debating of the controversies. In which point the most palpable error hath been already spoken of, as that, through the strangeness and freshness of the abuse first of itself to the conceits of all men.

Now concerning the occasion of the controversies, it can be denied, but that the imperfections in the conversation and government of those which have chief place in the Church have ever been principal causes and motives of schisms and divisions. For whilst the bishops and governors of the Church continue full of knowledge and good works; whilst they feed the people indeed; whilst they deal with the secular states in all justice and resolution, according to the majesty of their calling, and the precious care of souls imposed upon them, so long as the Church is "situated" as it were "upon a hill;" no man maketh question of it, or seeketh to depart from it; but these virtues in the fathers and leaders of the Church have been in their light, and that they wax worldly, lovers of themselves.

of men, then men begin to grope for the Church in the dark; they are in doubt whether they be the successors of the Apostles, or of the Pharisees; yea, however they sit in Moses' chair, yet they can never speak, "langquam auctoritatem habentes," as having authority, because they have lost their reputation in the consciences of men, by declining their steps from the way which they trace out to others; so as men need continually have sounding in their ears this verse "Nolite exire," Go not out; so ready are they to depart from the Church upon every voice. And therefore it is truly noted by one that writeth as a natural man, that the humility of the *homo dei*, for a great time, maintain and beat out the irreligion of bishops and prelates.

For this is the double policy of the spiritual enemy, either by counterfeiting holiness of life to establish and wither the church; or by corruption of manners to discredit and draw in question both man and things divine. "This counterfeits" say some the bishops, unto whom I am witness to myself, that I stand affected as I ought. His counterfeits hath supplanted in me the reverence that I owe to their calling; without any distinction or salutary difference mine opinion of their persons. I know some of them, whose names are most pierced with these accusations, to be men of great virtue; although the disposition of the times, and the want of correspondence many ways, is enough to frustrate the best endeavours in the edifying of the Church. And for the rest, generally, I can condemn none. I am no judge of them that belong to so high a Master; neither have I "two witnesses." And I know it is truly said of Fame, that

"Pariter facta, atque infecta canebat."^o

The second occasion of controversy, is the nature and humour of some men. The Church never wanteth a kind of persons which love the salutation of Rabbi, master; not in ceremony or compliment, but in an inward authority which they seek over men's minds, in drawing them to depend upon their opinions, and to seek knowledge at their lips. These men are the true successors of Diotryphus, the lover of pre-eminence, and not lord bishops. Such spirits do light upon another sort of natures, which do adhere to these men; "quorum gloria in obsequio;"† stiff followers and such as zeal mar-

^o "Things done relates, not done she feigns; and mingles truth with him."—*Dryden's Fourth Aeneid*.

† *Whom glory is in obedience.*

vellously for those whom they have chosen for their masters. This latter sort, for the most part, are men of young years, superficial understanding, carried away with partial respect to persons, or with the enticing appearance of godly names and pretences. "*Pauci res ipsas sequuntur, plures nomina replantini nomina magistrorum*," few follow the things themselves, more the names of the things, and most the names of their masters.

The third occasion of controversies I observe to be extreme and unlimited detestation of some former heresy or corruption of the Church already acknowledged and convicted. This was the cause that produced the heresy of Arius, grown especially upon detestation of Gentilism, lest the Christians should seem, by the assertion of the equal divinity of our Saviour Christ, to approach unto the acknowledgment of more than one. The detestation of the heresy of Arius produced that of Sabellius; who holding for execrable the dissimilitude which Arius pretended in the Trinity, fled so far from him, he fell upon that other extremity, to deny the distinct persons; and to say, they were but only names of several orders and dispensations. Yea, most of the heresies and schisms of the Church have sprung up of this root; while men have taken it as it were their scale, by which to measure the bounds of most perfect religion; taking it by the farthest distance from the error last condemned. These be "*posthumi heresim*;" heresies that arise out of the ashes of other heresies, are extinct and amortised.

This manner of apprehension doth in some degree prevail many in our times. They think it the true touchstone to what is good and evil, by measuring what is more or less opposite to the institutions of the church of Rome, be it ceremony, be it policy, or government; yea, be it other institution of greater weight, that is ever most perfect which is removed in degrees from that church; and that is ever polluted and defiled, which participateth in any appearance with it. This is a subtle and dangerous conceit for men to entertain; and to delude themselves, more apt to delude the people, and more apt of all to calumniate their adversaries. This surely, that a notorious condemnation of that position was before our eyes, had long since brought us to the re-baptisation of children baptised according to the pretended catholic religion; to see that which is a matter of much like reason, which is the ordaining of priests, is a matter already resolutely maintained. It is very meet that men beware how they be abused by opinion; and that they know, that it is a consideration of

wisdom and sobriety to be well advised, whether in al demolition of the institution of the church of Rome, were not, as men's actions are imperfect, some good ged with the bad, rather than to purge the Church, as they etend, every day anew; which is the way to make a wound n the bowels as is already begun.

The fourth and last occasion of controversies he declares to be the partial affectation and imitation of foreign churches; and then he proceeds to trace the growth and progress of the controversy actually disturbing the Church:—

It may be remembered that, on that part which calls for reformation, was first propounded some dislike of certain ceremonies supposed to be superstitious; some complaint of dumb ministers who possess rich benefices; and some invectives against the idle and monastical continuance within the universities, by those who had livings to be resident upon; and such like abuses. Thence they went on to condemn the government of bishops as an hierarchy remaining to us of the corruptions of the Roman church, and to except to sundry institutions in the Church, as not sufficiently delivered from the pollutions of former times. And lastly, they are advanced to define of an only and perpetual form of policy in the Church; which without consideration of possibility, and foresight of peril, and perturbation of the Church and State, must be erected and planted by the magistrate. Here they stay. Others, not able to keep footing on so steep ground, descend farther; that the same must be entered into and accepted of the people, at their peril, without the attending of the establishment of authority. And so in the mean time they refuse to communicate with us, reputed us to have no Church. This has been the progression of that side: I mean of the generality. For I know, some persons, being of the nature, not only to love extremities, but also to fall to them without degrees, were at the highest strain at the first.

But the defenders of the Church, he shows, had not kept one tenor neither. Besides they had taken far too high a ground in regard to the matters in dispute.

It is very hard to affirm that the discipline which they say we want is one of the essential parts of the worship of God

and not to affirm withal that the people themselves, up of salvation, without staying for the magistrate, are to themselves into it. I demand, if a civil state should the preaching of the word and baptism, and interdict include the sacrament of the Lord's supper, were not men upon danger of their souls, to draw themselves to congregations where they might celebrate this mystery, and not to themselves with that part of God's worship which the magistrate had authorised? 'Tis I speak, not to draw them the mislike of others, but into a more deep consideration of themselves: "*Fortasse non redeunt, quia suum progressum intelligunt.*"

Again, to my lords the Bishops I say that it is left to them to avoid blame, in the opinion of an indifferent person standing so precisely upon altering nothing. "*Leges legibus non recreantur, acescunt;*" laws, not refreshed with laws, wax sour. "*Qui mala non permutat, in bonis non severat;*" without change of ill a man cannot continue good. To take away many abuses supplanteth not good, but establisheth them. "*Moresa moris retentio res turbat, æque ac novitas;*" a contentious retaining of customs a turbulent thing, as well as innovation. A good husband ever pruning in his vineyard or his field; not unseasonably indeed, not unskilfully, but lightly, he sheweth ever some to do. We have heard of no offers of the Bishops of parliament; which, no doubt, proceeding from them to it properly belongeth, would have everywhere received acceptance.

I pray God to inspire the bishops with a fervent love and care of the people, and that they may not so much urge in controversy as things out of controversy, which we confess to be gracious and good: and thus much for this point.

The next point which he takes up is the unbecoming proceedings of both parties. This charge, he objects chiefly touches that side having most power to do wrong.

The wrongs of them which are possessed of the government of the Church towards the other may hardly be dissented or excused: they have changed them as though they do but owe to Cæsar, and withdrew from the civil magistrate the obedience which they have ever performed and ought to have sorted and coupled them with the "family of love."

they have laboured to destroy and confute. They have left of credit to receive accusations against them from whom they have quarrelled with them but for speaking against vice. Their accusations and inquisitions have been tearing men to blanks and generalities, not included compass of matter certain, which the party which is to condemn may comprehend, which is a thing captious and false. Their urging of subscription to their own articles *lancessere et irritare morbos ecclesie*,"* which otherwise would feed and exercise themselves. "Non consensum querit dominum, qui, quod factis prestatatur, in verbis exigit:" which is not unity, but division, which exacteth that in which men are content to yield in action. And it is more some which, as I am persuaded, will not easily be in conformity who notwithstanding make some consent to subscribe; for they know this note of inconstancy is taken from that which they have long held shall disengage them to do that good which otherwise they might do; for the weakness of many, that their ministry should be discredited. As for their easy silencing of them, in the scarcity of preachers, it is to punish the people, and not to keep them. Ought they not, I mean the bishops, to keep one eye open upon the good that those men do, not to fix them on the hurt that they suppose cometh by them? Indeed they are intemperate and incorrigible, God forbid they be permitted to preach: but shall every inconsiderate man be sometimes captiously watched, and for the most part silenced, be as a forfeiture of their voice and gift in the church?

For the libels and invectives of the other party, he calls them to be mere headless arrows, which can do little or no real harm. Only, with regard to the articles adopted by the worst set of them, of calling aid "certain mercenary bands, which impugn and other ecclesiastical dignities, to have the their endowments and livings; of these," he cannot speak too hardly. It is an intelligence of incendiaries and robbers, the one to fire the house and the other to rifle it." He censures also their manner of "certain cognizances and differences, which they seek to correspond amongst themselves, to excite and irritate the diseases of the church.

and to be separate from others." And he objects to systematic depreciation of men as pious and preachers scriptural as themselves.

Now for their own manner of preaching, what is it? See they exhort well and work compunction of mind, and tell men well to the question, "*Viri fratres, quid faciemus?*"* that is not enough, except they resolve the question. They handle matters of controversy weakly, and "*obiter*,"† as before a people that will accept of anything. In doctrine of manners there is little but generality and repetition. In word, the bread of life, they toss up and down, they break not; they draw not their directions down "*ad casus scientiæ*," that a man may be warranted in his particular actions whether they be lawful or not; neither indeed many of them able to do it, what through want of ground knowledge, what through want of study and time. It is compendious and easy thing to call for the observation of Sabbath day, or to speak against unlawful gain, but actions and works may be done upon the Sabbath, and may not; and what courses of gain are lawful, and in what cases to set this down, and to clear the whole matter with good distinctions and decisions, is a matter of great knowledge, labour, and asketh much meditation and conversing in Scriptures, and other helps which God has provided and served for instruction.

Again, they carry not an equal hand in teaching people their lawful liberty, as well as their restraints and prohibitions; but they think a man cannot go too far in that hath a show of a commandment.

They forget that there are sins on the right hand as well as on the left, and that the word is double-edged, and cuts on both sides, as well the profane transgressions as the superstitious observances. Who doubteth but that it is as unlawful to shut where God hath opened, as to open where God hath shut; to bind where God hath loosed, as to loose where God hath bound? Amongst men it is commonly as all take turn tack favours as to disobey commandments. In kind of zeal, for example, they have pronounced generally, without difference, all unchristian unlawful; notwithstanding the midwives are directly reported to have been blessed for the excuse; and Rahab is said by faith to have conce

* *Men and brethren, what shall we do?* † By the way

spies; and Solomon's selected judgment proceeded upon a relation; and our Saviour, the more to touch the hearts of two disciples with an holy dalliance, made as if he would have passed Kimmans.

Another point of great inconvenience and peril is, to engage the people to hear controversies, and all kinds of doctrine. They say no part of the counsel of God is to be suppressed, nor the people defrauded; so as the difference which the apostle maketh between milk and strong meat is confounded; and his precept that the weak be not admitted unto questions and controversies taketh no place.

But most of all is to be suspected, as a seed of farther inconvenience, their manner of handling the Scriptures; for that they seek express Scripture for everything, and that they do, in a manner, deprived themselves and the Church of a special help and support, by embasing the authority of the fathers, by resort to naked examples, conceited inferences and forced notions, such as do mine into all certainty of religion.

Another extremity is the excessive magnifying of that which, though it be a principal and most holy institution, yet is within its limits, as all things else have. We see wheresoever, in a manner, they find in the Scriptures the word spoken of, they expound it of preaching; they have made it, in a manner, of the essence of the sacrament of the Lord's supper, to serve as a sermon precedent; they have, in a sort, annihilated the use of liturgies and forms of divine service, although the house of God be denominated of the principal, "*domus orationis*," a house of prayer, and not a house of preaching. As for the use of the good monks and hermits in the primitive church, now they will condemn a man as half a papist if he should maintain them as other than profane because they heard no sermons. In the mean time, what preaching is, and who may be said to preach, they move no question; but, as far as I see, every man that presumeth to speak in chair is accounted a preacher. But I am assured that not a few that call hotly for preaching ministry deserve to be the first themselves that should be expelled. All which errors and misproceedings they fortify and intrench by an addicted respect to their own opinions, and an impatience to hear contradiction or argument; yea, I know some of them that would think it a tempting of God to hear or read what may be said against them; as there could be a "*Quod bonum est tenete*,"* without an "*Omnia probate*,"† going before.

* *Hold to that which is good.*

† *Prove all things.*

I know the work of exhortation doth chiefly rest upon the meek, and they have zeal and hate of sin: but again, let them take heed that it be not true which one of their adversaries said, that they have but two small wants, knowledge and judgment. And so I conclude this point. . . .

Lastly, whatsoever be pretended, the people is no mediator, but rather the quiet, modest, private assembly and conferences of the learned. "*Qui apud incapacem quitur, non disceptat, sed calumniatur*"*. The press and pulpit would be freed and discharged of these contentions; neither promotion on the one side, nor glory and heat on the other, ought to continue those challenges and cartels at cross and other places; but rather all preachers, especially all such as be of good temper, and have wisdom with conscience, ought to inculcate and beat upon a peace, silence, and surceance. Neither let them fear Solon's law, which compelled in factions every particular person to range himself to the one side; nor yet the fond calumny of neutrality; but let them know that is true which is said by a wise man, that parties in contentions are either better or worse than either side.

Its moderation and impartiality of tone would scarce if it is to be feared, recommend this paper to any party at the time when it was written; and Bacon, upon further consideration or upon advising with his friends, probably saw good reason for suppressing it. Nor would it have been very acceptable to either side at a much later date even than that at which it was actually published, when the great struggle between the established church and nonconformists was renewed with more earnestness than ever in the next century. Any chance that such exhortation has of being listened to is only when men are beginning to think of a contest; and it has not much chance then. So long as the state of things is or seems to be tolerably tranquil, the dominant side rejects such counsel as uncalled for and almost treacherous; when the storm has fairly begun it soon drowns and makes men deaf to all sounds but its own. At no time indeed is such advice as Bacon here gives calculated to produce immediately much of a popular impression.

* *He who speaks to an incompetent auditor, does not reason, but utters calumnies.*

at a long while work itself into the general mind; first it finds only an individual here and there disposed to receive it, and they are those by whom it is needed. It was addressed without effect to the cold and angry tempers of the two parties on the eve of the civil war; after about another half-century it appeared that the excellent Archbishop Sancroft collated and rectified both the Advertisement and the Consideration with great care, probably with the view of republishing them in aid of his favourite scheme of a compromise of the Dissenters. They were first printed as we have them from the copies left by him in Burne's edition of Bacon's works, in 4 vols. folio,

the discourse entitled "Certain Considerations touching a better Pacification and Edification of the Church of England" is longer and still more elaborate than the advertisement; but it consists in part of a repetition of the things in that earlier paper, and, from going into a detailed examination of the then existing practices of the Church, is not throughout of so much interest for all times and seasons. It is addressed, as is mentioned, to King James, and commences

"The unity of your Church, excellent Sovereign, is a thing more precious than the union of your kingdoms; being both wherein your happiness may contend with your worthiness. Having therefore presumed, not without your Majesty's approbation, to say somewhat on the one, I am encouraged not to be silent on the other: the rather because it is an argument that I have travelled in before. But I commendeth a word spoken in season; and as our Saviour, speaking of the discerning of seasons, saith, "When thou seest a cloud rising in the west, thou sayest it will be a shower;" so your Majesty's rising to this monarchy in the west parts of the world, doth promise a sweet and fruitful shower of many blessings upon this Church and commonwealth; a shower of that kind as the very first dews and drops thereof have already begun to fall; storms and winds throughout Christendom; reducing the face of Europe to a more peaceable and amiable countenance. But to the purpose.

Very true, that these ecclesiastical matters are things

not properly appertaining to my profess' on; which I was so inconsiderate but to object to myself; but finding that it many times seen that a man that standeth off, and somewhat removed from a plot of ground, doth better survey it and discover it than those which are upon it, I thought it not impossible but that I, as a looker-on, might cast mine eyes upon some things which the actors themselves, especially some being interested, some led and addicted, some declared and engaged did not or would not see. And knowing, in my conscience whereto God beareth witness, that the things which I shew speak, spring out of no vein of popularity, ostentation, desire of novelty, partiality to either side, disposition to a termiddle, or any the like leaven; I may conceive hope, that what I want in depth of judgment may be countervailed in simplicity and sincerity of affection. But of all things this did most animate me; that I found in these opinions of mine, which I have long held and embraced, as may appear by that which I have many years since written of them, according to the proportion notwithstanding of my weakness, a consent and conformity with that which your Majesty hath published of your own most Christian most wise, and moderate sense, in these causes; wherein you have well expressed to the world, that there is infused in your sacred breast, from God, that high principle and position of government,—That you ever hold the whole more dear than any part.

An eulogium upon James follows, in part the same with that afterwards inserted in the beginning of the *Advancement of Learning*; and then, before entering upon the special matters in dispute, two objections are taken up which directly confront and oppose themselves to reformation: the first, that it is against good policy to innovate anything in church matters; the other, that reformation must be after one plattform, or plan. He then takes up the first:—

For the first of these, it is excellently said by the prophet, "State super vias antiquas, et videte, quamam sit via recta vera, et ambulate in eâ."* So as he doth not say, "State super vias antiquas et ambulate in eis."† For it is true, that with wise and moderate persons, custom and usage obtaineth that

* Stand fast in the old ways, and see what is righteous and good, and walk in that.

† Stand fast in the old ways, and walk in them.

as it is sufficient matter to move them to make a stand, & discover, and take a view; but it is no warrant to guide and direct them, a just ground, I say, it is of deliberation, but of direction. But on the other side, who knoweth not that he truly compared to a stream that carrieth down fresh and waters into that salt sea of corruption which environeth man's actions. And therefore if man shall not by his industry, virtue, and policy, as it were with an oar, row against storm and inclination of time; all institutions and orders, be they never so pure, will corrupt and degenerate, not to handle this matter common-place like, I would ask, why the civil state should be purged and restored by such wholesome laws, made every third or fourth year in general assembly, devising remedies as fast as time breedeth mischief; and contrariwise the ecclesiastical state should continue upon the dregs of time, and receive no alteration in these five-and-forty years and more? If any man shall say that if the like intermission had been used in civil causes the error had not been great: surely the wisdom of the ancients hath been otherwise in experience for three hundred years at least. But if it be said to me, that there is a difference between civil causes and ecclesiastical, they may as well tell me that churches and chapels need no reparations, but castles and houses do, whereas commonly, to speak of dilapidations of the inward and spiritual edifications of the church of God are in all times as great as the outward and carnal. Sure I am that the very word and style of reformation used by our Saviour, "*Ab initio non fuit sic*,"* was apt to church matters, and those of the highest nature, concerning the law moral. . . .

There remaineth yet an objection, rather of suspicion than reason; and yet such as I think maketh a great impression upon the minds of very wise and well affected persons, which is that if way be given to mutation, though it be in taking away abuses, yet it may so acquaint men with sweetness of change as it will undermine the stability even of that which is good and good. This surely had been a good and true lesson in the ancient contentions and divisions between the people and the senate of Rome; where things were carried by the appetites of multitudes, which can never keep within compass of any moderation: but, these things being with us, have an orderly passage, under a king who hath a royal

* *It hath not been so from the beginning.*

power and approved judgment, and knoweth as well the measure of things as the nature of them; it is surely a needless fear. For they need not doubt but your Majesty, with the advice of your council, will discern what things are intermingled like the tares amongst the wheat, which have their roots so wrapped and entangled, as the one cannot be pulled up without endangering the other; and what are mingled but as the chaff and the corn, which need but a fan to sift and sever them. So much therefore for the first point, of no reformation to be admitted at all.

In regard to the second point, that there should be but one form of discipline in all churches, Bacon admits that it is a matter about which volumes have been compiled, and that cannot therefore be fully argued in brief space; but, he adds, "I, for my part, do confess, that in revolving the Scriptures I could never find any such thing; but that God had left the like liberty to the Church government as he had done to the civil government; to be varied according to time, and place, and accidents, which nevertheless his high and divine providence doth order and dispose." He then proceeds to the particular questions of controversy, or rather of reformation, and considers, in succession, the Government of Bishops; the Liturgy, Ceremonies, and Subscription; the demand for a Preaching Ministry; the alleged abuse of Excommunication; Non-Resistents, and Pluralities; the provision to be made for sufficient Maintenance of the Clergy. Upon all these subjects the inclination of his opinion is, as in the former paper, for a middle course, as the most likely to prove generally satisfying and comprehensive, and for a sacrifice of mere forms and other non-essentials to conscientious scruples. Yet he is far from approving of all the notions and demands of the opponents of the established system. It will be sufficient that we give what he says on a Preaching Ministry:—

To speak of a learned ministry: it is true that the worthiness of the pastors and ministers is of all other points of religion the most summary, I do not say the greatest, but the most effectual towards the rest: but herein, to my understanding

son in zeal to hasten this work, they are not aware of greater inconvenience than that which they seek. For while they inveigh against a dumb ministry as easy and too promiscuous an allowance of such untutored preachers; having not respect enough to their other arts, which are handmaids to divinity; not regard to years, except it be in case of extraordinary respect enough to the gift itself, which many times is wanting. For God forbid, that every man that can take boldness to speak an hour together in a church, should be admitted for a preacher, though he be so well. I know there is a great latitude in gifts, variety in auditories and congregations; but yet *"aliquid minimum,"* below which you ought not to descend. For you must rather leave the ark to shake as it pleased God, than put unworthy hands to hold it up. And in God's temple, we are warned rather to "put our feet on the stones" than to offer the sacrifice of fools." And it may be justly thought, that amongst many causes of which are miserably met in our age, as schisms and heresies, profane scoffings in holy matters and others; it is not that divers do adventure to handle the word of God, but that many are unfit and unworthy. And herein I would have taken care, as if I would extol curious and affected preaching, which is as much on the other side to be disliked, as atheism and scandal as well as the other: for who is offended at one that cometh into the pulpit as if he were to play parts or prizes? neither on the other side would I discourage any who hath any tolerable gift.

At this point I ground three considerations:—first, that it were not requisite to renew that good exercise which was used in this Church some years, and afterwards put under indeed from the Church, in regard of some inconvenience for those times; and yet against the opinion of one of the greatest and gravest prelates, who said that the ministers within a precinct did meet upon a sabbath in some principal town, where there was some minister that was president, and an auditory of gentlemen or other persons of leisure. Then every one successively, beginning with the youngest, did handle some part of Scripture, spending severally some

* A lowest point.

quarter of an hour or better, and in the whole some two hours; and so the exercise being begun and concluded with prayer, the president giving a text for the next meeting, the assembly was dissolved. And thus was, as I take it, a fortnight's exercise: which, in my opinion, was the best way to frame and train up preachers to handle the word of God as it ought to be handled, that hath been practised. For we see orators in their declamations, lawyers have their moots, logicians their sophisms, and every practice of science hath an exercise of addition and imitation before men come to the life; only preaching, which is the worthiest, and wherein it is most dangerous to be amiss, wanteth an introduction, and is ventured and rushed upon at the first. But unto this exercise of the prophecy I would add these two additions: the one, that after this exercise, which in some sort public, there were immediately a private meeting of the same ministers, where they might brotherly admonish the one the other, and especially the elder sort the younger, of anything that had passed in the exercise, in matter or manner, unseasonably and uncomely: and in a word, might mutually use such admonition, instruction, comfort, or encouragement, as occasion might minister; for public reprehension were to be debarred. The other addition that I mean is, that the same exercise were used in universities for young divines before they presumed to preach, as well as in the country, for ministers. For they have in universities an exercise called a common-place, which can in no degree be so profitable, being but the speech of one man at one time. And if it be feared that it may be occasion to women's speeches for controversies, it is easily remedied, by a strict prohibition, that matters of controversy tending any way to the violating or disquieting the peace of the Church, be not handled or entered into; which prohibition, in regard thereof ever to be a grave person president or moderator, cannot be frustrated. The second consideration is, whether it were convenient there should be a more exact probation and examination of ministers; namely, that the bishops do not ordain alone, but by advice; and then that ancient holy order of the Church might be revived; by the which the bishop did ordain ministers but at four set times of the year; which were "Quatuor tempora;" which are now called Ember-weeks, being thought fit to accompany so high an action with great fasting and prayer, and sermons and all holy exercises; the names likewise of those that were to be ordained, were published some days before their ordination; to the end exceptions might be taken, if just cause were. The third consideration

that if the case of the Church of England be, that were a computation taken of all the parochian churches, allowing the union of such as were too small and adjacent, and again a computation to be taken of the persons who were worthy to be pastors, and upon the said account if it fall out that there are more churches than pastors, then of necessity recourse must be had to one of these remedies; either that pluralities must be allowed, especially if you can by permutation make the benefices more compatible; or that there be allowed preachers to have a more general charge, to supply and serve by turn parishes unfurnished: for that some churches should be provided of pastors able to teach, and others wholly destitute seemeth to me to be against the communion of saints and Christians, and against the practice of the primitive Church.

There is an unfinished Dialogue of Bacon's, entitled "An Advertisement touching an Holy War, written the year 1622," which is partly of a theological character; but it may be said to relate more directly to foreign politics, and we shall therefore reserve it till we come to his political writings, among which it has been commonly reckoned.

His remaining theological compositions are only a few short pieces. The first is his "Confession of Faith," first published in a quarto pamphlet of twelve pages, 1641; then in the *Remains*, 1648; then by Rawley, the *Resuscitatio*, 1657. Of its authenticity, therefore, there can be no doubt. It exists also in various manuscripts in the British Museum: one copy (Birch M. 4263) Mr. Montagu conceives to be in Bacon's own hand-writing. In the *Remains* the Confession is stated to have been written by him about the time when he was Solicitor-General (A.D. 1607-1612). It is admitted to be a perfectly orthodox exposition of the leading doctrines of the Christian faith, as held by the Church of England; and it has all Bacon's usual luminousness and force of expression. The following are perhaps its most noticeable particulars:—He declares his belief, that, after his creation in the divine image, "Man made a total defection from God, presuming to imagine that the commandments and prohibitions of God were not the rules of good and evil, but that good and evil had their own principles and beginnings, and lusted after the knowledge

those imagined beginnings; to the end to depend more upon God's will revealed, but upon himself and own light as a God, than the which there could not be a sin more opposite to the whole law of God." The subject of the Incarnation his statement is, "That the Word did not only take flesh, or was joined to it, but was made flesh, though without confusion of substance or nature; so as the Eternal Son of God and ever-blessed Son of Mary was one person; so one, as the blessed Virgin may be truly and catholically called Deipara, the Mother of God; so one, as there is no such in universal nature, not that of the soul and body of man so perfect." Another article is, "That the Church hath power over the Scriptures to teach or command nothing contrary to the written word, but is the ark wherein the tables of the first Testament were kept and served; that is to say, the Church hath only the custody and delivery over of the Scriptures committed unto her, together with the interpretation of them, but only as is conceived from themselves." This is a distinct and fair statement of the right of interpretation as claimed by the Church of England, and of the difference upon that point between the English Church and Church of Rome, which latter asserts the right of interpreting absolutely and without any restriction, from tradition or by mere authority as well as from lights furnished by the Scriptures themselves. The following are the concluding articles: —

That there is also an holy succession in the prophets of the New Testament and Fathers of the Church, from the time of the apostles and disciples which saw our Saviour in the flesh, to the consummation of the work of the ministry; which persons are called from God by gift, or inward anointing, and vocation of God followed by an outward calling and ordination of the Church.

I believe that the souls of such as die in the Lord are blessed and rest from their labours, and enjoy the sight of God, yet as they are in expectation of a farther revelation of their glory to the last day. At which time all flesh of man shall arise and be changed, and shall appear and receive from Jesus Christ his final judgment; and the glory of the saints shall then be made manifest, and the kingdom shall be given up to God the father.

all things shall continue for ever in that being and in that they shall receive. So as there are three times, or may be called, or part of eternity. The first, the beginnings, when the Godhead was only, without any creature. the second, the time of the mystery, from the creation to the dissolution of the world. the third, the time of the revelation of the sons of God. This time is the last, and is everlasting without change.

One of these pieces that falls to be noticed is entitled *The Characters of a Believing Christian, in his own and seeming Contradictions.*" It is said to have been first published by itself in 1645; it is included in the *Collection of Remains* published in 1648; a copy is stated to have been found among the papers of Archbishop Sancroft; but it does not appear in the *Reminiscences*; it is nowhere noticed either by Tenison; and no manuscript of it is known.

In these circumstances its authenticity has been questioned. We do not see any thing either in the style or in the manner and intention of the paper which should make it probable that it was written by Bacon.* He has

If any reader would see all the evidence stated at full length, he may resort to Mr. Montagu's *Preface to the Seventh Volume* of his edition of Bacon's Works, pp. cxvi. to p. xl. inclusive. This is altogether one of the most remarkable of Mr. Montagu's Prefaces, perhaps the most remarkable of them all. To the usual inundation and digressive matter, all but swamping the material or facts, is in this instance added the peculiarity of a repetition of the disquisition, without explanation or after only the first third part of the proposed ground has gone over: we have the Theological Tracts, designated first, or at least four of the eight, described and distinguished by the most diffuse minuteness of detail, the last four noticed all in half a page and then the Miscellaneous and the Judicial Charges and Tracts, forming the Second Division, quietly omitted, as if some leaves were torn from the volume. As a typographical curiosity, too, this Preface is probably without its match in modern literature. Nearly all the seventeen volumes of this standard edition of Bacon appear to have been printed from uncorrected proofs. Throughout this Preface the compositor has exerted

elsewhere distinctly avowed his opinion that reason and faith are not only different, but in a certain sense opposed the one to the other. A remarkable passage in the beginning of the Ninth Book of the *De Augmentis Scientiarum*, might almost seem to have been written for an introduction to these Paradoxes:—" *Prærogativa Dei totum hominem complectitur; &c.*;" that is, "The prerogative of God comprehends the whole man, and stretches over our reason not less than over our will; so that man must renounce himself, and draw near to God, in his universal being. Wherefore, as we are bound to obey the divine law, although our will struggle against it, in like manner we must believe the word of God even when it shocks our reason. For if we believe only such things as are agreeable to our reason, we assent to the matter, not to the author; which is no more than what we are wont to do even to a suspected witness By how much our divine mystery is the more revolting and incredible,

himself with no common skill and success to turn nearly every third or fourth sentence into a puzzle. Let the reader for instance try what he can make of the following:—[This tract thus noticed by Archbishop Tension in the "Baconiana" "Confession of Faith," written by him in English, and turned into Latin by Doctor Rawley, upon which there was some correspondence between Dr. Maynwaring and Dr. Rawley, the archbishop, in describing the letters to Lord Bacon, says "The Second is, a letter from Dr. Maynwaring to Dr. Rawley concerning his lordship's 'Confession of Faith.'"]—Or of the beginning of one of the notes:—[Blackburn, in the fourth volume of his edition of Bacon, A.D. 1730, p. 438, says, "Archbishop Sancroft has reflected some credit on them by a careful review, having in very many instances corrected and prepared them for the press: among the other unquestioned writings of his lordship, I annex some of the passages from Blackburn where Archbishop Sancroft is mentioned."] The publication of this standard edition began, a little to the surprise of the subscribers, with the *Second* volume and when the *First* followed it appeared with cancels for no fewer than twenty seven pages in different parts of its predecessor, but after this striking illustration it seems to have been thought that the reader might well be left to make the necessary corrections in the succeeding volumes for himself.

the more honour do we render to God in believing it, and so much the nobler is the victory of our faith. . . . And indeed, if we will truly consider it, it is a higher use of the mind to believe than to know, we can know in this state of existence. For in knowing we are acted upon by sense, which is reflected from material objects; but in believing, by spirit, which is the nobler agent. It is otherwise in the state of glory; then faith shall cease, and we shall know even as we are known.* Read with this explanation, the Paradoxes perfectly consistent with every thing else that Bacon has written; they contain no impiety or infidelity, but are in fact only a statement of the manner in which the subject must have presented itself to him when he brought his ingenious, refusing, antithetical mind to bear upon it. There are thirty-four of them in all; but the following may suffice for a sample:—

1. A Christian is one that believes things his reason cannot comprehend; he hopes for things which neither he nor any man has ever saw: he labours for that which he knoweth he shall never obtain; yet in the issue, his belief appears not to be false; his hope makes him not ashamed; his labour is not in vain.

6. He praises God for his justice, and yet fears him for his mercy. He is so ashamed as that he dares not open his mouth before God; and yet he comes with boldness to God, and asks for any thing he needs. He is so humble as to acknowledge himself to deserve nothing but evil; and yet believes that God sends him all good. He is one that fears always, yet is as bold as a lion. He is often sorrowful, yet always rejoicing; many times complaining, yet always giving of thanks. He is most self-minded, yet the greatest aspirer; most contented, yet ever craving.

24. He is often tossed and shaken, yet is as Mount Sion; he is a serpent and a dove; a lamb and a lion; a reed and a cedar. He is sometimes so troubled, that he thinks nothing to be true in religion; yet if he did think so, he could not at all be troubled. He thinks sometimes that God hath no mercy for him, yet resolves to die in the pursuit of it. He believes, like

* This is an extension of a passage near the end of the Second book of the *Advancement of Learning*.

Abraham, against hope, and though he cannot answer God's logic, yet, with the woman of Canaan, he hopes to prevail with the rhetoric of importunity.

33. His death makes not an end of him. His soul which is put into his body, is not to be perfected without his body; his soul is more happy when it is separated from his body than when it was joined unto it: And his body, though broken in pieces, burnt to ashes, ground to powder, turned to rottenness, shall be no loser.

34. His advocate, his surety shall be his judge; his mortal part shall become immortal; and what was sown in corruption and defilement shall be raised in incorruption and glory; and this feeble creature shall possess an infinite happiness. Glory be to God.

Of Bacon's firm belief not only in the general truth of Christianity, but in all its most mysterious doctrines commonly received, no doubt can be entertained by a mind that has come without prejudice to the perusal of his writings. He has indeed been charged in modern times by some controversialists of the ultra Roman party with employing so many professions of faith and piety merely to mask his real convictions from the vulgar eye; while he has at the same time, it is pretended, in other passages either allowed the truth to escape him inadvertently, or purposely taken care to make himself sufficiently intelligible to the more discerning reader. But this is the mere virulence and lunacy of party hatred. The whole strain of what Bacon has written, it may be safely affirmed, without the exception of a single sentence testifies to his mind being made up in favour of the truth of Revelation. And that not from mere education, use and wont, but from reflection and examination of himself. He was evidently a great reader of theological works; he displays a familiar acquaintance with learning both of ecclesiastical history and of polemics, as well as with the Scriptures; and at the same time all his expositions and arguments have the unmistakable air of having mingled with and taken their colour from his own mind. Besides, it is to misconceive Bacon's character both intellectual and moral, to suppose him to have been a person likely, in the age in which he lived, to dive

no crowd into doubt or infidelity. He was as to have tried to raise a rebellion in the land on a question of practical politics. And his genius was bold and sanguine, not at all sceptical, what it added in was the building up and embellishing of an opinion; it would have been far more apt in its employment to employ itself in inventing new supports for such a system as Christianity—so stimulating to both the intellect and the imagination—than in searching with cold logical subtlety for insufficiency or weakness in a position which men commonly relied on.

In his theological works are inserted four Prayers, the first of which was first published in the *Remains*, and is there entitled "A Prayer made and used by my late Lord Chancellor." But another first printed in the Second Part of the *Resuscitatio* (1661), and there entitled "A Prayer or Psalm made by my Lord Bacon, Lord of England," is far more interesting, both as to its composition and from the circumstances in which it is supposed to have been written. Mr. Montagu has hinted at the possibility of its non-authenticity, founded on the fact that whether the Second Part of the *Resuscitatio*, in which it is published in the name and during the life of Bacon, nevertheless may not contain some matter of which Bacon was not the author and which may have been introduced by the bookseller without the sanction of the professed editor. But fortunately there exists in the Bodleian Museum (Ayscough MS. 4263), a copy of the Prayer in the handwriting of Rawley's amanuensis, most probably the copy from which it was printed in the *Resuscitatio*. This is more satisfactory than the one in No. 267 of the Tatler, understood to be by Bacon, that the Prayer, with the title we have given, was found amongst his lordship's papers, written with a hand: "the heading in question is certainly not Bacon himself would naturally have prefixed to it. The Prayer must have been composed, as will be perceived, after he had ceased to be Chancellor, or at least some time before a storm before which he fell had burst upon him. The composition of eminent beauty, combining eleva-

tion with pathos perhaps in as high a degree as any thing that was ever written:—

Most gracious Lord God, my merciful Father, from my youth up, my Creator, my Redeemer, my Comforter. Thou, O Lord, soundest and searchest the depths and secrets of all hearts: thou acknowledgest the upright of heart, thou judgest the hypocrite, thou ponderest men's thoughts and designs as in a lance: thou measurest their intentions as with a line: vain and crooked ways cannot be hid from thee.

Remember, O Lord, how thy servant hath walked before thee: remember what I have first sought, and what hath been principal in my intentions. I have loved thy assemblies, I have mourned for the divisions of thy Church: I have delighted in the brightness of thy sanctuary. This vine which thy right hand hath planted in this nation, I have ever prayed unto thee that it might have the first and the latter rain; and that it might stretch her branches to the seas and to the floods. The food and bread of the poor and oppressed have been precious in my eyes: I have hated all cruelty and hardness of heart. I have thought in a despised weed, procured the good of all men. If any have been my enemies, I thought not of them; neither has the sun almost set upon my displeasure, but I have been patient, free from superfluity of maliciousness. Thy creatures have been my books, but thy Scriptures much more. I have sought thee in courts,* fields, and gardens; but I have found thee in thy temples.

Thousands have been my sins, and ten thousands my transgressions: but my sanctifications have remained with me, and my heart, through thy grace, hath been an unquenched fire upon thine altar. O Lord, my strength, I have since my youth met with thee in all my ways; by thy fatherly compassion, by thy comfortable chastisements, and by thy most visible providence. As thy favours have increased upon me, so have thy corrections, so as thou hast been always near me, O Lord; ever as my worldly blessings were exalted, so secret darts of thine have pierced me, and when I have ascended before thee, I have descended in humiliation before thee. And now, when I thought most of peace and honour, thy hand is heavy upon me, and hath humbled me according to thy former love.

* The common copies, and also the MS., have "the courts," which, however, is evidently inadmissible.

liness; keeping me still in thy fatherly school, not as a
 ward, but as a child. Just are thy judgments upon me for
 sins, which are more in number than the sands of the sea,
 I have no proportion to thy mercies. For what are the sands
 the sea to the sea, earth, heavens? And all these are nothing
 thy mercies.* Besides my innumerable sins, I confess
 thee, that I am debtor to thee for the gracious talent of
 gifts and graces, which I have neither put into a napkin,
 nor put it, as I ought, to exchangers, where it might have made
 it profit, but mispent it in things for which I was least fit: so
 may truly say, my soul hath been a stranger in the course of
 pilgrimage. Be merciful unto me, O Lord, for my Sa-
 vor's sake, and receive me into thy bosom, or guide me in
 thy ways.

Two other short Prayers were first printed in the *Ba-
 ptisma* (1679). One is there stated to have been called
 by Bacon himself "The Student's Prayer;" it is a trans-
 scription from one of the paragraphs of the Preface pub-
 lished with the *Novum Organum* in 1620:—

To God the Father, God the Word, God the Spirit, we pour
 forth most humble and hearty supplications; that he remem-
 ber the calamities of mankind, and the pilgrimage of this
 life, in which we wear out days few and evil, would please
 open to us new refreshments out of the fountains of his good-
 ness, for alleviating of our miseries. This also we humbly and
 earnestly beg, that human things may not prejudice such as are
 divine; neither that from the unlocking of the gates of sense,
 and the kindling of a greater natural light, anything of incredul-
 ity, or intellectual night, may arise in our minds towards divine
 mysteries. But rather, that by our mind thoroughly cleansed
 and purged from fancy and vanities, and yet subject and per-

* In Mr. Montagu's and all the common editions the reading
 "For what are the sands of the sea, earth, heavens, and all
 these are nothing to thy mercies." For this nonsense the copy
 the Tatler substitutes "for what are the sands of the sea?
 earth, heavens, and all these are nothing to thy mercies." The
 MS. in the Museum has been injured, and is partially oblite-
 rated; but the reading given in the text (we believe for the first
 time), though some of the writing has become very faint, may
 still be detected.

rectly given up to the divine oracles, there may be given up with the things that are faithful. Amen.

The other is stated to have been entitled by Bacon "The Writer's Prayer;" it is translated from the concluding paragraph of the exposition of the entire plan of the *Instauratio Magna* (*Distributio Operis*) which was also prefixed to the *Novum Organum* on its first publication:—

Thou, O Father, who gavest the visible light as the birth of thy creatures, and didst pour into man the intellectual light as the top and consummation of thy workmanship, pleased to protect and govern this work which coming from thy goodness, returneth to thy glory. Thou, after thou hadst reviewed the works which thy hands had made, beheldest that every thing was very good, and thou didst rest with complacency in them. But man, reflecting on the works which he had made, saw that all was vanity and vexation of spirit, and could by no means acquiesce in them. Wherefore, if we labour in thy work with the sweat of our brows, thou wilt make us partakers of thy vision, and thy sabbath. We humbly beg that this mind may be steadfastly in us; and that thou, by our hands, and also the hands of others, on whom thou shalt bestow the same spirit, wilt please to convey a largeness of new alms to thy family mankind. These things we commend to thy everlasting love by our Jesus, thy Christ, God with us. Amen.

Lastly, there is "The Translation of Certain Psalms into English Verse," first published by Bacon himself in a 4to. pamphlet, in 1628, and reprinted in the Second Part of the *Resuscitatio* (1661). In a Dedication to "Very good friend, Mr. George Herbert (the well known sacred poet)," Bacon describes these performances as the poor exercise of his sickness, meaning, according to Tenison, a sickness which he had had in this year 1628. The Psalms which he versifies are the First, the Twelfth, the Ninetieth, the Hundred and Fourth, the Hundred and Twenty-sixth, the Hundred and Thirty-seventh, and the Hundred and Forty-ninth. The translation or paraphrase, which he produces of the First, will be sufficient specimen:—

Who never gave to wicked reed *
 A yielding and attentive ear;
 Who never sinners' paths did tread,
 Nor sat him down in scorner's chair;
 But maketh it his whole delight
 On law of God to meditate;
 And therein spendeth day and night:
 That man is in a happy state.

He shall be like the fruitful tree
 Planted along a running spring,
 Which, in due season, constantly
 A goodly yield of fruit doth bring:
 Whose leaves continue always green,
 And are no prey to winter's pow'r:
 So shall that man not once be seen
 Surprised with an evil hour.

With wicked men it is not so,
 Their lot is of another kind:
 All as the chaff, which to and fro
 Is toss'd at mercy of the wind.
 And when he shall in judgment plead,
 A casting sentence bide he must:
 So shall he not lift up his head
 In the assembly of the just.

For why? the Lord hath special eye
 To be the godly's stay at call:
 And hath given over, righteously,
 The wicked man to take his fall.

The attempt, it will be perceived, is not very successful; but it is one in which Milton has failed, as well as Bacon; and it may therefore be concluded that there is something in this old Hebrew poetry not very pliable to the trammels of English metre, at least of the more natural or artificial kind. Perhaps what the genius of Milton chiefly wanted for such a task was more of natural plainness and spontaneous fervour; and there Bacon is also deficient. But the latter, with all his wonderful splendour and promptitude of fancy, and also his lofti-

* Counsel.

ness and grandeur of conception, was essentially a rhetorician, not a poet. He wanted sensibility in all its force. If he was a deep thinker, of depth of feeling he certainly had no capacity. There is no passion in anything he has written, any more than there was ever anything he spirited in his conduct. His verses might have had the coloured light of poetry, but they would have had none of its fire. And, perhaps, in other respects also of nature, both moral and intellectual, wanted the unity and completeness, the harmonious combination of opposite endowments, necessary for "the vision and the fact divine" which makes a great poet.

SECTION V.

THE HISTORICAL WORKS.

has himself in his Latin Letter to Father Ful-
 , written towards the close of his life, classed toge-
 is Moral and his Historical works; and they come
 ly under the same division. They are distinguished
 : same general character from his other writings:
 his Philosophical or Scientific works on the one
 from his Letters, and other remains chiefly re-
 y to the events of his own life or of his own time,
 other. Under these three heads all his writings
 e conveniently enough arranged. His Moral and
 ogical works are full of narrative or historical pas-
 his Historical works of moral disquisition and re-
 n. History, in truth, is only ethical and economical
 ation in a narrative form, the actual exemplification
 principles and precepts of moral wisdom.

on's principal and indeed only considerable histo-
 rork is his 'History of the Reign of King Henry
 'venth,' first published, in a folio volume, in 1622.
 s," says Tenison, "was the first book which he
 sed after his retirement from an active life." We
 already had occasion to quote his Letter to the
 of the 21st of April, 1621, announcing his inten-
 ' writing it.

another Letter to the King, dated the 8th of Oc-
 he seems to speak of it as already finished. "I
 not," he says, "have presumed to entreat your
 y to look over the book, and correct it, or at least
 ify what you would have amended; but, since you
 ased to send for the book, I will hope for it." It
 as we have seen from the Letter of Sir Thomas
 ys, *been perused by his majesty in manuscript*

before the 7th of January of the following year. The author presents printed copies of his work to the king and Buckingham in Letters dated from Gorhambury the 20th of March, 1622.* In a Letter to Meautys, dated the 21st, he expressly speaks of it as having been three months in the king's hands. When it appeared in print it was introduced by a short Dedication, without date, to the Prince of Wales (afterwards Charles I.). The first translation of it appears to have been that into French which was published in 8vo. at Paris in 1627. The Latin version was first published at London in 1638, folio, in the collection of pieces, entitled 'Francisci Baconi, Baronis, &c., Moraliū et Civilium Tomus—Ipso honoratissimo auctore, præterquam in paucis, Latinitate donatus; Cura et fide Guilielmi Rawley, &c.' which we have already had occasion to refer. The title page would seem to entitle us to conclude that the History of Henry the Seventh had been turned into Latin by Bacon himself; since, from its extent, it certainly cannot well come under the description of the few things in the volume excepted from the general statement that he had been his own translator. Rawley also in his Life of Bacon, expressly mentions the translation into Latin of this History as among "the fruits and productions of his last five years." And in the Dedication of the last edition of the Essays to the Duke of Buckingham, as we have seen, Bacon himself speaks

* Mr. Montagu, in his bibliographical Preface to the History (*Works*, vol. i i), throws the whole statement into confusion by making it appear as if the letter of October, 1621, had been written *subsequently* to those of March, 1622 (or 1621 according to the then mode of reckoning). Throughout the edition, as far as we have observed, Mr. Montagu's attention is never by any chance once awakened to the circumstance that in Bacon's time the year did not end till the 24th of March, and the quantity of perplexity, contradiction, and unintelligibility occasioned in every part of his labours by this singular inadvertency is past all describing. In the present instance the substance of the Letters ought to have prevented their misarrangement.

having now also translated his History into Latin. In the first instance, however, as would appear from his Letter to Mr. Toby Matthew, quoted in a preceding section, he had contemplated getting the History as well as the Essays translated by another hand.

One biographer of Bacon after another has spoken of the History of Henry the Seventh as a performance in which Bacon's ability and eloquence almost deserted him, or at least as a work markedly and indisputably inferior to everything else of any considerable pretension that he has left us. No race of writers so repeat and parrot one another as the common tribe of biographers so take both facts and opinions upon trust. And, in the case especially of a voluminous writer, it is from his biographers and not from himself that the popular notion of him is almost exclusively derived. The vulgar judgment upon Bacon's Henry the Seventh, we may with perfect safety affirm, can only have come out of the work not having been read by the generality of those who have written about it. No probable dulness or insensibility in the critic could otherwise have either originated or taken up so false a notion. It is simply a fact, which will not bear disputing, that this History of Bacon's is, in the first place, one of the most characteristic of his works, and one which he has evidently executed most *con amore* and with his whole heart and soul in what he was about; and, secondly, that it is one of the most animated, graphic, and altogether felicitous historical pieces in the language. The list of our historical works of eminent merit, indeed, is so short that it would not be much to ask, what else have we of the same kind that is better or so good; but we may observe that, when it first appeared, the best judges could find only one other work, Camden's Latin Annals of the Reign of Elizabeth, to compare with it; and nobody who knows the two will now admit that respectable but not brilliant performance to be even an example of the same kind of writing. If Bacon's Henry the Seventh had any worthy precursor it was Sir Thomas More's Richard the Third, of which it is in fact the continuation. But that is merely a fragment. And, after

[illegible]

The following is a list of the names of the persons who have been appointed to the various offices of the County of Los Angeles, California, for the year 1900:

[illegible]

the
his
the
the
the

marriage with the Lady Elizabeth gave him the heart that both knee and heart did truly bow before him."

Henry, however, was in no hurry to seek that additional support. The battle was fought on the 22nd of August, 1485; the now king was solemnly crowned on the 30th of October; and it was not till the 18th of January in the following year that the marriage was celebrated "with greater triumph and demonstrations," writes Bacon, "especially on the people's part, of joy and gladness, than the days either of his entry or coronation, which the king rather noted than liked." "And it is true," he adds, "that all his lifetime, while the Lady Elizabeth lived with him, for she died before him, he showed himself no very indulgent husband towards her, though she was beautiful, gentle, and fruitful. But his aversion towards the House of York was so predominant in him, that it found place not only in his wars and councils but in his chamber and bed." The narrative then proceeds:—

Towards the middle of the spring, the king full of confidence and assurance, as a prince that had been victorious in battle and had prevailed with his parliament in all that he desired, and had the ring of acclamations fresh in his ears, thought that the rest of his reign should be but play, and the enjoying of a kingdom, yet as a wise and watchful king, he would not neglect anything for his safety, this king, nevertheless, to perform all things now rather as an exercise than as a labour. So he being only informed that the northern parts were not only affectionate to the House of York, but particularly had been devoted to King Richard the Third, thought it would be a summer well spent to visit those parts, and by his presence and application of himself to reclaim and rectify those humours. But the king, in his account of peace and calms, did much overcast his fortunes, which proved for many years together full of broken seas, tides, and tempests. For he was no sooner come to Lincoln, where he kept his Easter, but he received news that the Lord Lovel, Humphrey Stafford, and Thomas Stafford, who had formerly taken sanctuary at Colchester, were departed out of sanctuary, but to what place no man could tell: which advertisement the king despised and continued his journey to York. At York there came fresh and more certain advertisement, that the Lord Lovel was at hand with a great power

men, and that the Staffords were in arms in Worcester and had made their approaches to the city of Worcester. The king, as a prince of great and profound counsel, was not much moved with it; for that he thought it was but a rag or remnant of Bosworth field, and had nothing of the main party of the House of York. But he was more of the raising of forces to resist the rebels, than of the doing of himself, for that he was in a core of people whose loyalty he suspected. But the action enduring no delay, he did levy and send against the Lord Lovel to the number of five thousand men, all armed but well assured, being taken few out of his own train, and the rest out of the train of followers of such as were safe to be trusted, under the command of the Duke of Bedford. And as his manner was to be merciful rather before the sword than after, he gave order to the duke to proclaim pardon to all that would lay down their arms, which the duke upon his approach to Lord Lovel's camp did perform. And it fell out as the king expected; the Lord Lovel, and the great ordnance. For the Lord Lovel, upon his offer of pardon, mistrusting his men, fled into Lancashire, and being for a time with Sir Thomas Braughton, after he was driven into Flanders to the Lady Margaret; and his men, of which he was their captain, did presently submit themselves to the Duke of Bedford. The Staffords likewise, and their forces, hearing what was befallen to the Lord Lovel, in whose success their chief hope was despaired and dispersed; the two brothers taking refuge at Colnham, a village near Abingdon. Which place, for the want of their privilege in the King's Bench, being judged not a sanctuary for traitors, Humphrey was executed at Tyburn. Thomas, as being led by his elder brother, was pardoned. This rebellion proved but a blast, and the king having his journey purged a little the dregs and leaven of the people that were before in no good affection towards him, returned to London.

Then follows the story of the first Pretender, *Perkin Warbeck*.

There followed this year, being the second of the reign, a strange accident of state, whereof the relations we have are so naked, as they leave it scarce credible the nature of it, for it hath fallen out often, but for the cause and circumstance of it, especially in the beginning, before we shall make our judgment upon the things

as they give light one to another, and as we can dig truth out of the mine. The king was green in his estate; and contrary to his own opinion and desert both, was not without much hatred throughout the realm. The root of all was the discountenancing of the House of York; which the general body of the realm still affected. This did alienate the hearts of the subjects from him daily more and more, especially when they saw, that after his marriage, and after a son born, the king did, nevertheless, not so much as proceed to the coronation of the queen, not purchasing her the honour of a matrimonial crown; for the coronation of her was not till almost two years after, when longer had taught him what to do. But much more when it was spread abroad, whether by error or the cunning of malcontents, that the king had a purpose to put to death Edward Plantagenet closely in the Tower: whose case was so nearly paralleled with that of Edward the Fourth's children, in respect of the blood, like age, and the very place of the Tower, so it did refresh and reflect upon the king a most odious resemblance, as if he would be another King Richard. And all this time it was still whispered everywhere, that at least one of his children of Edward the Fourth was living: which bruit was cunningly somented by such as desired innovation. Neither was the king's nature and customs greatly fit to disperse these mists, but contrariwise, he had a fashion rather to create doubts than assurance. Thus was fuel prepared for the spark: the spark, that afterwards kindled such a fire and combustion, was at the first contemptible.

There was a subtle priest called Richard Simon, that lived in Oxford, and had to his pupil a baker's son, named Lambert Kinnell, of the age of some fifteen years, a comely youth, and well favoured, not without some extraordinary dignity and grace of aspect. It came into this priest's fancy, hearing what men talked, and in hope to raise himself to some great bishopric, to cause this lad to counterfeit and personate the second son of Edward the Fourth, supposed to be murdered; and afterwards, for he had changed his intention in the manage, the Lord Edward Plantagenet, then prisoner in the Tower, and accordingly to frame him and instruct him in the part he was to play. This is that which, as was touched before, seemeth scarcely credible; not that a false person should be assumed to gain a kingdom, for it hath been seen in ancient and late times; nor that it should come into the mind of such an abject fellow to enterprise so great a matter; for high conceits do sometimes come streaming into the imaginations of base

persons, especially when they are drunk with news and talk of the people. But here is that which hath no appearance that this priest being utterly unacquainted with the true person, according to whose pattern he should shape his countenance, should think it possible for him to instruct his players either in gesture or fashions, or in recounting past matters of his life and education; or in fit answers to questions, or the like, any ways to come near the resemblance of him whom he was to represent. For this lad was not to personate one that had been long before taken out of his cradle, or conveyed away in his infancy, known to few; but a youth, that till the age of most of ten years had been brought up in a court where infinite eyes had been upon him. For King Edward, touched with remorse of his brother the Duke of Clarence's death, would not indeed restore his son, of whom we speak, to be Duke of Clarence, but yet created him Earl of Warwick, reviving his honour on the mother's side; and used him honourably during his time, though Richard the Third afterwards confined him. So that it cannot be, but that some great person that knew particularly and familiarly Edward Plantagenet, had a hand in the business, from whom the priest might take his aim. That which is most probable, out of the precedent and subsequent acts is, that it was the queen-dowager from whom this action had the principal source and motion. For certain it is she was a busy negotiating woman, and in her withdrawing chamber had the fortunate conspiracy for the king against King Richard the Third been hatched; which the king knew, and remembered perhaps but too well; and was at this time extremely discontent with the king, thinking her daughter, as the king handled the matter, not advanced but depressed: and none could hold the book so well to prompt and instruct this stage-play as she could. Nevertheless it was not her meaning, nor no more was it the meaning of any of the better and sager sort that favoured this enterprise, and knew the secret, that this disguised idol should possess the crown; but at his peril to make way to the overthrow of the king, and that done they had their several hopes and ways. That which doth chiefly fortify this conjecture is, that as soon as the matter brake forth in any strength it was one of the king's first acts to cloister the queen-dowager in the nunnery of Bermondsey, and to take away all her lands and estate; and this by a close council, without any legal proceeding, upon far-fetched pretences, that she had delivered her two daughters out of sanctuary to King Richard, contrary to promise. Which proceeding being even at that time taxed

and undus, both in matter and manner, makes it very
 p there was some greater matter against her, which
 p upon reason of policy, and to avoid envy, would not
 . It is likewise no small argument that there was some
 ill, and some suppressing of examinations, for that the
 imon himself, after he was taken, was never brought to
 in; no, not so much as to public trial, as many clergy-
 en upon less treasons, but was only shut up close in a
 e. Add to this, that after the Earl of Lincoln, a mem-
 ber of the House of York, was slain in Stoke-Field,
 e opened himself to some of his council, that he was
 e the earl's death, because by him, he said, he might
 owe the bottom of his danger

e return to the narration itself: Simon did first instruct
 lar for the part of Richard, Duke of York, second son to
 dward the Fourth; and this was at such time as it was
 that the king purposed to put to death Edward Plan-
 tagenet in the Tower, whereat there was great mur-
 der hearing soon after a general bruit that Plantagenet
 aped out of the Tower, and thereby finding him so
 elored amongst the people, and such rejoicing at his
 the cunning priest changed his copy, and chose now
 enet to be the subject his pupil should perorate,

he was more in the present speech and votes of the
 and it pieced better, and followed more close and
 ooly, upon the bruit of Plantagenet's escape. But yet
 g that there would be too near looking, and too much
 ive into his disguise, if he should show it here in Eng-
 e thought good, after the manner of scenes in stage plays
 aka, to show it afar off; and therefore sailed with his
 into Ireland, where the affection to the House of York was
 beight. The king had been a little imprudent in the
 of Ireland, and had not removed officers and counsellors,
 it in their places, or at least intermingled, persons
 n he stood assured, as he should have done, since he
 is strong bent of that country towards the House of
 and that it was a ticklish and unsettled state, more easy
 re distempers and mutations than England was. But
 to the reputation of his victories and successes in Eng-
 e thought he should have time enough to extend his
 forwards to that second kingdom.

efore, through this neglect, upon the coming of Simon
 e pretended Plantagenet into Ireland, all things were
 e for revolt and sedition, almost as if they had been set

and plotted beforehand.—Simon's first address was to the Thomas Fitz-Gerard, Earl of Kildare, and deputy of Ireland, before whose eyes he did cast such a mist, by his own nation, and by the carriage of his youth, that expressed a naturally princely behaviour, as joined perhaps with some inward vapour of ambition and affection in the earl's own mind, left him so possessed, that it was the true Plantagenet. The earl presently communicated the matter with some of the nobles, and others, at the first secretly; but finding them of like affection to himself, he suffered it of purpose to vent and pass abroad, because they thought it not safe to resolve till they had a trial of the people's inclination. But if the great ones were inwardness, the people were in fury, entertaining this airy boy or phantasm with incredible affection, partly out of their devotion to the House of York, partly out of a proud humour in the nation, to give a king to the realm of England. Nor did the party in this heat of affection, much trouble themselves with the attainder of George, Duke of Clarence; having not learned by the king's example, that attainders do not interpose the conveying of title to the crown. And as for the daughter of King Edward the Fourth, they thought King Richard had said enough for them; and took them to be but as of the king's party, because they were in his power and at his disposing. So that with marvellous consent and applause, this comely Plantagenet was brought with great solemnity to the castle of Dublin, and there saluted, served, and honoured as king; the boy becoming it well, and doing nothing that did bewray baseness of his condition. And within a few days after he was proclaimed king in Dublin, by the name of King Edward Sixth; there being not a sword drawn in King Henry his quarrel.

Henry's first proceeding, for reasons which are somewhat mysterious, was the seclusion of the queen dowager, his mother-in-law, in the nunnery of Bermoisey:—

This lady was amongst the examples of great variety of fortune. She had first from a distressed suitor, and desolate widow, been taken to the marriage bed of a bachelor king, the goodliest personage of his time; and even in his reign she endured a strange eclipse by the king's flight, and temporary depriving of the crown. She was also very happy, in that she had by him fair issue; and continued his nuptial love, by giving herself by some obsequious bearing and dissembling.

pleasures to the very end. She was much affectionate to her own kindred, even unto faction; which did stir great envy in the lords of the king's side, who counted her blood a disparagement to be mingled with the king's. With which lords of the king's blood joined also the king's favourite, the Lord Hastings; who, notwithstanding the king's great affection to him, was thought at times, through her malice and spleen, not to be out of danger of falling. After her husband's death she was matter of tragedy, having lived to see her brother beheaded, and her two sons deposed from the crown, bastarded in their blood, and cruelly murdered. All this while nevertheless she enjoyed her liberty, state, and fortunes: but afterwards again, upon the rise of the wheel, when she had a king to her son-in-law, and was made grandmother to a grandchild of the best sex; yet was she upon dark and unknown reasons, and no less strange pretences, precipitated and banished the world into a nunnery; where it was almost thought dangerous to visit her, or see her; and where not long after she ended her life: but was by the king's commandment buried with the king her husband, at Windsor. She was foundress of Queen's College in Cambridge. For this act the king sustained great obloquy, which nevertheless, besides the reason of state, was somewhat sweetened to him by a great confiscation.

A page or two farther on we are introduced to another female member of the House of York, destined to figure conspicuously in the sequel, the Lady Margaret of Burgundy:—

Margaret was second sister to King Edward the Fourth, and had been second wife to Charles, surnamed the Hardy, Duke of Burgundy, by whom, having no children of her own, she did with singular care and tenderness, intend the education of Philip and Margaret, grandchildren to her former husband, which won her great love and authority among the Dutch. This Princess, having the spirit of a man and malice of a woman, abounding in treasure by the greatness of her dower and her provident government, and being childless, and without any nearer care, made it her design and enterprise to see the majesty royal of England once again replaced in her house and had set up King Henry as a mark at whose overthrow all her actions should aim and shoot, insomuch as all the counsel of his succeeding troubles came chiefly out of that quiver. *And she bare such a mortal hatred to the house of Lancas*

and personally to the King, as she was noways mollified by conjunction of the houses in her niece's marriage, but related her niece as the means of the King's ascent to the crown and assurance therein.

The cause of the Pretender had been taken up in England, most probably with a view to ulterior objects of his own, by John Earl of Lincoln, son of John de Pole, Duke of Suffolk, and of Elizabeth, King Edward the Fourth's eldest sister, a man of great wit and courage; two thousand Germans had come over under command of Martin Swart, a valiant and experienced captain; and the rebels in these circumstances determined to leave Ireland, and to strike their great blow in England. "The King, in the mean time, who at first when he heard what was done in Ireland, though troubled him, yet thought he should be well enough able to scatter the Irish as a flight of birds, and rattle away this swarm of bees with their king; when he heard afterwards that the Earl of Lincoln was embarked in action, and that the Lady Margaret was declared for him, he apprehended the danger in a true degree as it was, and saw plainly that his kingdom must again be put at the stake, and that he must fight for it." And he is the narrative of the bloody issue as it was determined near Newark, in Nottinghamshire, on the 16th of June 1487:—

The Earl, nothing dismayed, came forward that day unto a little village called Stoke and there encamped that night, under the brow or hanging of a hill. The King next day presented him battle upon the plain, the fields there being open and champaign. The Earl courageously came down and joined battle with him. Concerning which battle the relations that are current unto us are so naked and negligent, though it be an action of so recent memory, as they rather declare the success of the battle than the manner of the fight. They say that the King divided his army into three battails, whereof the vanguard only, strengthened with wings, came to fight: that the fight was fierce and obstinate and lasted three hours before the victory declared either way, save that judgment might be made by the King's vanguard of itself maintained fight against the

power of the enemies (the other two battails remaining out of action), what the success was like to be in the end—that Martin Swart with his Germans performed bravely, and so did those few English that were on that side: neither did the Irish fail in courage or fierceness, but, being almost naked men, only armed with darts and skeins, it was rather an execution than a fight upon them, insomuch as the furious slaughter of them was a great discouragement and appalment to the rest: that there died upon the place all the chieftains, that is, the Earl of Lincoln, the Earl of Kildare, Francis Lord Lovel, Martin Swart, and Sir Thomas Broughton, all making good the fight without any ground given. Only of the Lord Lovel there went a report that he fled, and swam over Trent on horseback, but could not recover the farther side by reason of the steepness of the bank, and so was drowned in the river. But another report leaves him not there, but that he lived long after in a cave or vault. The number that was slain in the field was, of the enemy's part, four thousand at the least, and of the King's part, one half his vanguard, besides many hurt, but none of name. There were taken prisoners, amongst others, the counterfeit Plantagenet, now Lambert Simnell again, and the crafty priest, his tutor. For Lambert, the King would not take his life, both out of magnanimity, taking him but as an image of wax that others had tempered and moulded, and likewise out of wisdom, thinking that if he suffered death he would be forgotten too soon, but, being kept alive, he would be a continual spectacle, and a kind of remedy against the like enchantments of people in time to come. For which cause he was taken into service in his court to a base office in his kitchen, so that, in a kind of "mattacina" of human fortune, he turned a broach that had worn a crown; whereas fortune commonly doth not bring in a comedy or farce after a tragedy. And afterwards he was preferred to be one of the King's falconers. As to the priest, he was committed close prisoner, and heard of no more—the King loving to seal up his own dangers.

Passing over many other things, all brilliantly related, we will now proceed to the more famous story of the second Pretender, Perkin Warbeck, first heard of in 1492:—

At this time the King began again to be haunted with spirits, by the magic and curious arts of the Lady Margaret, who raised the ghost of Richard, Duke of York, second son to King Edward the Fourth, to walk and vex the King. This was

finer counterfeit stone than Lambert Simnel, better done and worn upon greater hands, being graced after with the wearing of a King of France and a King of Scotland, not of a Duke of Burgundy only. And for Simnel, there was not much in him more than that he was a handsome boy, and did not shame his robes. But this youth of whom we are now to speak was such a mercurial as the like hath seldom been known, and could make his own part if at any time he chanced to be out. Wherefore this, being one of the strangest examples of a person that ever was, in elder or later times, it deserveth to be discovered and related at the full — although the King's manner of showing things by pieces and by dark lights hath so muffled it, that it hath been left almost as a mystery to this day.

The Lady Margaret, whom the King's friends called Juno because she was to him as Juno was to Æneas, stirring both heaven and hell to do him mischief, for a foundation of her particular practices against him, did continually, by all means possible, murmur, maintain, and divulge the flying rumour that Richard, Duke of York, second son to Edward the Fourth, was not murdered in the Tower, as was given out, but saved alive. For that those who were employed in that barbarous fact, having destroyed the elder brother, were stricken with remorse and compassion towards the younger, and set him privily at liberty to seek his fortune. This lure she cast abroad, thinking that this fame and belief, together with the fresh example of Lambert Simnel, would draw, at one time or other, some bird to strike upon it. She used likewise a further diligence, not committing all to chance, for she had some secret espials, like to the Turks' commissioners for children of tribute, to look abroad for handsome and graceful youths, to make Plantagenets and Dukes of York. At the last she did light on one, in whom all things met as one would wish, to serve her turn for a counterfeit Richard, Duke of York.

This was Perkin Warbeck, whose adventures we shall now describe. For first, the years agreed well. Secondly, he was a youth of fine favour and shape. But more than that, he had such a crafty and bewitching fashion, both to move pity, and to induce belief, as was like a kind of fascination and enchantment to those that saw him or heard him. Thirdly, he had been from his childhood such a wanderer, or, as the King called him, such a land-loper, as it was extreme hard to hunt out his name and parents. Neither again could any man, by company or conversing with him, be able to say or detect well what he would so flit from place to place. Lastly, there was a circumstance which is mentioned by one that wrote in the same

that is very likely to have made somewhat to it, that King Edward the Fourth was his godfather, it is somewhat suspicious for a wanton prince in so mean a house, and might make a man think indeed have in him some base blood of the house at the least, though that were not, it might give the boy, in being called King Edward's godson, to entertain such thoughts, King Edward's son, to entertain such thoughts. For tutor he had none, for ought that appears, well had, until he came unto the Lady Margaret, who instructed him.

Thus, therefore, it came to Tournay, that had born John Osbeck, a convert whose business drew him to London, in King Edward's time he had a son by her King, either out of a convert, or upon some private agreement, he god-father to his child, afterwards, proving a dainty

commonly called by the diminutive of his name, Peterkin or Peterkin. For as for the name of Warbeck, it was given him when they did but guess at it, before examinations had been taken. But yet he had been so much talked of by that name, as stuck by him after his true name of Osbeck was known. When he was a young child, his parents returned with him to Tournay. There he was placed in the house of a kinsman of his called John Stenbeck, at Antwerp, and so roved up and down between Antwerp and Tournay, and other towns of Flanders for a good time, living much in English company and having the English tongue perfect. In which time, being grown a comely youth, he was brought by some of the espials of the Lady Margaret into her presence. Who, viewing him well, and seeing that he had a face and personage that would bear a noble fortune, and finding him otherwise of a fine spirit and winning behaviour, thought she had now found a curious piece of marble to carve out an image of a Duke of York. She kept him by her a great while, but with extreme secrecy. The while she instructed him by many Cabinet conferences. First, in princely behaviour and gesture, teaching him how he should keep state and yet with a modest sense of his misfortunes. Then she informed him of all the circumstances and particulars that concerned the person of Richard, Duke of York, which he very

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to act, describing unto him the personages, lineaments, and features of the King and Queen, his pretended parents, and of his brother and sisters, and divers others, that were nearest him in his childhood, together with all passages, some secret, some common, that were fit for a child's memory, until the death of King Edward. Then she added the particulars of the time from the King's death, until he and his brother were committed to the Tower, as well during the time he was abroad as while he was in sanctuary. As for the times while he was in the Tower, and the manner of his brother's death, and his escape, she knew they were things, that a very few could control. And therefore she taught him only to tell a smooth and likely tale of those matters, warning him not to vary from it. It was agreed likewise between them what account he should give of his peregrination abroad, intermixing many things which were true, and such as they knew others could testify, for the credit of the rest, but still making them to hang together in the part he was to play. She taught him likewise how to answer sundry captious and tempting questions which were like to be asked of him. But in this she found him so nimble and ready, as she trusted much to his own wit and readiness, and therefore laboured the less in it. Lastly, she raised his thoughts with some present rewards, and further promises, setting before him chiefly the glory and fortune of a crown if things went well, and a sure refuge to her Court if the worst should come. After such time as she thought he was perfect in his lesson, she began to cast with herself from what coast this blazing comet should first appear, and at what time it must be upon the horizon of Ireland, for there had the like meteor strong influence before. The time of the apparition to be when the King should be engaged into a war with France. But well she knew that whatsoever should come from her would be well suspected. And therefore if he should go out of Flanders immediately into Ireland, she might be thought to have some hand in it. And besides, the time was not yet ripe, for that the two Kings were then upon terms of peace. Therefore she wheeled about; and to put all suspicion off, and loth to keep him any longer with her, for that she knew secrets are not long-lived, she sent him unknown into Portugal, with the Lady Bampton, an English lady, that embarked for Portugal at that time, with some private vado of her own, to have an eye upon him, and there he was to remain, and to expect her further directions. In the meanwhile she omitted not to prepare things for his better welcome, accepting, not only in the kingdom of Ireland, but in the co-

of France. He continued in Portugal about a year, and by that time the King of England called his Parliament, as hath been said, and declared open war against France. Now did the sign reign, and the constellation was come, under which Perkin should appear. And therefore he was straight sent unto by the Duchess, to go for Ireland, according to the first designment. In Ireland he did arrive, at the town of Cork. When he was thither come, his own tale was, when he made his confession afterwards, that the Irishmen, finding him in some good clothes, came flocking about him, and bare him down that he was the Duke of Clarence that had been there before. And after, that he was Richard the Third's base son. And lastly, that he was Richard, Duke of York, second son to Edward the Fourth. But that he, for his part, renounced all these things, and offered to swear, upon the Holy Evangelists, that he was no such man; till at last they forced it upon him, and bade him fear nothing, and so forth. But the truth is, that immediately upon his coming into Ireland, he took upon him the said person of the Duke of York, and drew unto him complices and partakers by all the means he could devise. Inasmuch as he wrote his letters unto the Earls of Desmond and Kildare, to come in to his aid, and be of his party; the originals of which letters are yet extant.

Somewhat before this time, the duchess had also gained unto her a near servant of King Henry's own, one Stephen Frion, his secretary for the French tongue; an active man, but turbulent and discontented. This Frion had fled over to Charles, the French king, and put himself into his service, at such time as he began to be in open enmity with the king. Now King Charles, when he understood of the person and attempts of Perkin, ready of himself to embrace all advantages against the King of England, instigated by Frion, and formerly prepared by the Lady Margaret, forthwith despatched one Lucas and this Frion, in the nature of ambassadors to Perkin, to advertise him of the king's good inclination to him, and that he was resolved to aid him to recover his right against King Henry, an usurper of England, and an enemy of France; and wished him to come over unto him at Paris. Perkin thought himself in heaven now that he was invited by so great a king in so honourable a manner. And imparting unto his friends in Ireland, for their encouragement, how fortune called him, and what great hopes he had, sailed presently into France. When he was come to the court of France, the king received him with great honour, saluted and styled him by the name of the Duke of

York : lodged him and accommodated him in great state, better to give him the representation and the countenance of a prince, assigned him a guard for his person, whereof the great captain was captain. The courtiers likewise, though it being with the French, applied themselves to their king's service, there was reason of state for it. At the same time there came unto Perkin divers Englishmen of quality, Sir George Throckmorton, Sir John Taylor, and about one hundred more, and amongst them Stephen Friar, of whom we spake, who for his fortune both then and for a long time after, and was, principal counsellor and instrument in all his proceedings. But all this on the French king's part was but a device better to bow King Henry to peace. And therefore the first grain of incense that was sacrificed upon the altar at Boloign, Perkin was smoked away. Yet would the French king deliver him up to King Henry, as he was bound to do, for his honour's sake, but warned him away and dismissed him. And Perkin, on his part, was as ready to be going, he might be caught up underland. He therefore went away into Flai ders, unto the Duchess of Burgundy, that, having been variously tossed by fortune, he did take his course thither as to a safe harbour, noways taking notice that he had ever been there before, but as if that had been his first address. The Duchess, on the other part, made it strange to see him, pretending, at the first, that she was deceived, and made wise, by the example of Lambert Simnel, who did admit of any counterfeit stuff, though, even in the end, she was not fully satisfied. She pretended also, and that was ever in the presence of others, to pose him, and to try whether he were indeed the very Duke or no. But seeming to receive full satisfaction by his answer, she then feigned herself to be transported, with a kindness, mixt of joy and wonder, at his miraculous recovery, receiving him as if he were risen from death, and inferring that God, who had in such wonderful manner reserved him from death, did likewise reserve him for a long and prosperous fortune. As for his dismissal out of the city, they interpreted it, not as if he were detected or known to be a counterfeit deceiver, but contrariwise, that it did manifestly unto the world that he was some great matter, and that his abandoning that, in effect, made the peace, more than the sacrificing of a poor distressed prince, for the utility and ambition of two mighty monarchs. Now Perkin, for his part, wanting to himself, either in

princely behaviour, or in ready and apposite answers, or contenting and caressing those that did apply themselves to him, or in pretty scorn and disdain to those that seemed to doubt of him, but in all things did notably acquit himself inasmuch as it was generally believed, as well amongst great persons as amongst the vulgar, that he was indeed Duke Richard. Nay, himself, with long and continual counterfeiting, and with oft telling a lie, was turned by habit almost into the thing he seemed to be, and from a liar to a believer. The duchess, therefore, as in a case out of doubt, did him princely honour, calling him always by the name of her nephew, and giving the delicate title of the white rose of England, and appointed him a guard of thirty persons, halberdier-clad in a party-coloured livery of murrey and blue, to attend his person. Her court, likewise, and generally the Dutch and strangers, in their usage towards him, expressed no less respect.

The news hereof came blazing and thundering over in England, that the Duke of York was sure alive. As for the name of Perkin Warbeck, it was not at that time come to light, but all the news ran upon the Duke of York; that he had been entertained in Ireland, bought and sold in France, and was now plainly avowed, and in great honour in Flanders. The fumes took hold of divers; in some upon discontent, in some upon ambition, in some upon levity and desire of change, and in some few upon conscience and belief, but in most upon simplicity, and in divers out of dependence upon some of the better sort, who did in secret favour and nourish these bruits. As it was not long ere these rumours of novelty had begotten others of scandal and murmur against the king and his Government, taxing him for a great taxer of his people, and discountenancer of his nobility. The loss of Britain and the peace with France were not forgotten. But chiefly they rested upon the wrong that he did his queen, in that he did not reign in her right. Wherefore, they said, that God had now brought forth a masculine branch of the house of York, that would be at his courtesy, howsoever he did depress his poor lady. As yet, as it saith with things which are current with the multitude, and which they affect, these fumes grew so general, as the authors were lost in the generality of the speakers; they became running weeds that have no certain root, or like foxgloves and down impossible to be traced. But after awhile these humours drew to an head, and settled secretly in some eminent persons, which were Sir William Stanley, lord chamberlain of the king's household, the Lord Fitzwater, Sir Simon M.

fort, and Sir Thomas Thwaites. These entered into a conspiracy to favour Duke Richard's title. Nevertheless not engaged their fortunes in this business openly but two, Sir Robert Clifford and Master William Barley, who sailed over into Flanders, sent, indeed, from the party of the conspirators here, to understand the truth of those things that passed there, and not without some help of monies from hence, provisionally to be delivered, if they found and were satisfied that there was truth in these pretences. The person of Sir Robert Clifford being a gentleman of fame and family, was extremely welcome to the Lady Margaret, who, after she had conference with him, brought him to the sight of Perkin, with whom he had often speech and discourse. So that in the end, won either by the sweetness to affect, or by Perkin to believe, he wrote back into England, that he knew the person of Richard, Duke of York, as well as he knew his own, and that this young man was undoubtedly he. By this means all things grew prepared to revolt and sedition here, and the conspiracy came to have a correspondence between Flanders and England.

The king, on his part, was not asleep, but to arm or lay forces yet, as thought would but show fear, and do this in too much worship. Nevertheless the ports he did shut up, and at least kept a watch on them, that none should pass to or from that was suspected: but, for the rest, he chose to work by contrivance. His purposes were two: the one to lay open the abuse, the other to break the knot of the conspirators. To detect the abuse there were but two ways: the first, to make it manifest to the world that the Duke of York was indeed murdered, the other to prove that, were he dead or alive, yet Perkin was counterfeit. For the first, thus it stood. There were but four persons that could speak upon knowledge to the murder of the Duke of York. Sir James Tirrel, the employed man from King Richard; John Dighton and Miles Forrest, his servants, the two butchers or tormentors, and the priest of the Tower that buried them. Of which four, Miles Forrest and the priest were dead, and there remained alive only Sir James Tirrel and John Dighton. These two the king caused to be committed to the Tower, and examined touching the manner of the death of the two innocent princes. They agreed both in a tale, as the king gave out, to this effect. that King Richard having directed his warrant for the putting of them to death to Brackenbury, the lieutenant of the Tower, was by him refused. Whereupon the king directed his warrant to Sir James Tirrel, to receive the keys of the Tower from the lieutenant, for the space of a night, for the King's

service. That Sir James Tirrel accordingly repaired Tower by night, attended by his two servants afore-named, he had chosen for that purpose. That himself stood at ir-foot, and sent these two villains to execute the murder, they smothered them in their bed, and, that done, called his master to see their naked dead bodies, which they had with. That they were buried under the stairs, and some cast upon them. That when the report was made to Richard, that his will was done, he gave Sir James Tirrel thanks, but took exception to the place of their burial, too base for them that were king's children. Whereupon, the night, by the king's warrant renewed, their bodies removed by the priest of the Tower, and buried by him in a place which, by means of the priest's death soon after, not be known. Thus much was then delivered abroad, the effect of those examinations; but the king, nevertheless made no use of them in any of his declarations, whereby, seems, those examinations left the business somewhat perfect. And as for Sir James Tirrel, he was soon after beheaded in Tower-yard for other matters of treason. But John de Witt, who, it seemeth, spake best for the king, was forthwith at liberty, and was the principal means of divulging the edition. Therefore, this kind of proof being left so naked, the king used the more diligence in the latter, for the tracing of it. To this purpose he sent abroad into several parts, and especially into Flanders, divers secret and nimble scouts and some feigning themselves to fly over unto Perkin, and to come to him, and some under other pretences, to learn, search, discover all the circumstances and particulars of Perkin's life, birth, person, travels up and down, and in brief to keep a journal as it were of his life and doings. He furnished his employed men, liberally with money, to draw on and buy intelligences; giving them also in charge, to advertise usually what they found, and, nevertheless, still go on, ever, as one advertisement and discovery called up another, employed other new men, where the business did require it. He employed in a more special nature and trust, to be spies in the main countermine. These were directed to get themselves into the familiarity and confidence of the principal persons of the party in Flanders, and so to learn what news they had, and correspondents, either here in England and abroad; and how far every one engaged, and what new ones meant afterwards to try or board. And as this for the means, so for the actions themselves, to discover to the

bottom, as they could, the utmost of Perkin's and the conspirators, their intentions, hopes, and practices. These last best-be-trust spies had some of them further instructions to practise and draw off the best friends and servants of Perkin by making remonstrance to them how weakly his enterprise and hopes were bunt, and with how prudent and patient a king they had to deal; and to reconcile them to the king with promises of pardon and good conditions of reward. And, above the rest, to assail, sap, and work into the constancy of Sir Robert Clifford, and to win him, if they could, being the man they knew most of their secrets, and who, being won away, would do most appal and discourage the rest, and in a manner break the knot.

There is a strange tradition that the king, being lost in a wood of suspicious, and not knowing whom to trust, had been in intelligence with the confessors and chaplains of divers gentlemen; and for the better credit of his espials abroad with the contrary side, did use to have them cursed at Paul's, by name, amongst the bead-roll of the king's enemies, according to the custom of those times. These espials plied their charge so roundly, as the king had an anatomy of Perkin alive, as he was likewise well informed of the particular correspondents and conspirators in England, and many other mysteries were revealed; and Sir Robert Clifford in especial won to be assured to the king, and industrious and officious for his service. The king, therefore, receiving a rich return of his diligence, was of great satisfaction touching a number of particulars, he divulged and spread abroad the imposture and juggling of Perkin's person and travels, with the circumstances thereof throughout the realm; not by proclamation, because times were yet in examination, and so might receive the more or less, but by court fables, which commonly print better than printed proclamations. Then thought he it also time to send an ambassage unto Archduke Philip into Flanders, for the abandoning and dismissing of Perkin. Herein he employed Sir Edward Poynings and Sir William Warham, doctor of the canon law. The archduke was then young, and governed by his council, before whom the ambassadors had audience, and Sir Wm. Warham spake in this manner:

"My lords, the king our master is very sorry that, England and your country here of Flanders having been counted a man and wife for so long a time, now this country of Flanders should be the stage where a base counterfeit should play the part of a King of England; not only to his grace's disquiet

and dishonour, but to the scorn and reproach of all sovereign princes. To counterfeit the dead image of a king in his coin is an high offence by all laws, but to counterfeit the living image of a king in his person, exceedeth all falsifications, except it should be that of a Mahomet, or an Antichrist, that counterfeit divine honour. The king hath too great an opinion of ~~this~~ sage council, to think that any of you is caught with this fable, though way may be given by you to the passion of some, the thing in itself is so improbable. To set testimonies aside of the death of Duke Richard, which the king hath upon record, plain and infallible, because they may be thought to be in the king's own power, let the thing testify for itself. Sense and reason no power can command. Is it possible, trow you, that King Richard should damn his soul and foul his name with so abominable a murder, and yet not mend his case? Or do you think that men of blood, that were his instruments, did turn to pity in the midst of their execution? Whereas, in cruel and savage beasts, and men also, the first draught of blood doth yet make them more fierce and enraged. Do you not know that the bloody executioners of tyrants do go to such errands with an halter about their neck; so that if they perform not they are sure to die for it? And do you think that these men would hazard their own lives for sparing another's? Admit they should have saved him, what should they have done with him? Turn him into London streets, that the watchmen or any passenger that should light upon him might carry him before a justice, and so all come to light? Or should they have kept him by them secretly? That surely would have required a great deal of care, charge, and continual fear. But, my lords, I labour too much in a clear business. The king is so wise, and hath so good friends abroad, as now he knoweth Duke Perkin from his cradle. And because he is a great prince, if you have any good poet here, he can help him with notes to write his life; and to parallel him with Lambert Simnell, now the king's falconer. And therefore, to speak plainly to your lordships, it is the strangest thing in the world that the Lady Margaret, excuse us if we name her, whose malice to the king is both causeless and endless, should now, when she is old, at the time when other women give over child-bearing, bring forth two such monsters; being not the births of nine or ten months but of many years. And whereas other natural mothers bring forth children weak, and not able to help themselves, she bringeth forth tall striplings, able soon after *their coming into the world*, to bid battle to mighty kings. *My lords, we stay unwillingly upon this part. We wou*

to God that lady would once taste the joys which God Almighty doth serve up unto her, in beholding her niece to reign in honour, and with so much royal issue, which she might pleased to account as her own. The king's request unto the archduke and your lordships might be, that, according to the example of King Charles, who hath already discarded his would banish this unworthy fellow out of your domain. But because the king may justly expect more from an enemy confederate, than from a new reconciled enemy, he makes request unto you to deliver him up into his hands; prelate impostors of this sort being fit to be accounted the common enemies of mankind, and no ways to be protected by the laws of nations."

Perkin afterwards obtained the countenance and favour of King James the Fourth of Scotland, who gave him in marriage the Lady Catherine Gordon, daughter of the Earl of Huntley, being a near kinswoman of his own, "and a young virgin of excellent beauty and virtue." In the winter of 1496-7, the Scottish King made an inroad into the northern counties of England, carrying his protégé along with him. Scarcely was this time over when an insurrection broke out in Cornwall at the levying of a subsidy which had been granted by parliament:—

The Cornish being a race of men, stout of stomach, strong of body and limb, and that lived hardy in a barren country, and many of them could, for a need, live under ground, were tilters. They muttered extremely, that it was not to be suffered, that for a little stir of the Scots, soon after, they should be thus grinded to powder with payment, and said it was for them to pay that had too much, and idly. But they would eat their bread they got with sweat of their brows, and no man should take it from them. And as in the tides of people once up, there want not commotion stirring winds to make them more rough; so this people light upon two ringleaders or captains of the rout. There was one Michael Joseph, a blacksmith or farrier, of Bodmin, a notable talking fellow, and no less desirous to be talked of. The other was Thomas Flamock, a lawyer, who, by his words to his neighbours commonly upon any occasion that the king was on their side, had gotten great sway amongst them. The

talked burningly, and as if he could tell how to make a rebellion, and never break the peace. He told the people, that subsidies were not to be granted, nor levied in this case; that he, for wars of Scotland; for that the law had provided another course, by service of escuage, for those journeys; much less when all was quiet, and war was made but a pretence to pill and pill the people. And therefore that it was good they should not stand now like sheep before the shearers, but put on harness, and take weapons in their hands. Yet to do no creature hurt but go and deliver the king a strong petition for the laying down of those grievous payments, and for the punishment of those that had given him that counsel; to make others beware how they did the like in time to come. And said, for his part he did not see how they could do the duty of true Englishmen, and good liege-men, except they did deliver the king from such wicked ones, that would destroy both him and the country. Their aim was at Archbishop Morton and Sir Reginald Bray, who were the king's screens in this envy.

After that these two, Flammoek and the blacksmith, had by just and several pratings found tokens of consent in the multitude, they offered themselves to lead them, until they should hear of better men to be their leaders, which they said would be ere long: telling them further, that they would be but their servants, and first in every danger; but doubted not but to make both the west-end and the east-end of England to meet in so good a quarrel; and that all, rightly understood, was but for the king's service. The people upon these seditious instigations, did run, most of them with bows and arrows, and bills, and such other weapons of rude and country people, and forthwith under the command of their leaders, which in such cases is ever at pleasure, marched out of Cornwall through Devonshire unto Taunton in Somersetshire, without any slaughter, violence, or spoil of the country. At Taunton they killed in fury an officious and eager commissioner for the subsidy, whom they called the Provost of Perin. Thence they marched to Wells, where the Lord Audley, with whom their leaders had before some secret intelligence, a nobleman of an ancient family, but quiet and popular, and aspiring to ruin, came in to them, and was by them, with great gladness and cries of joy, accepted as their general: they being now proud that they were led by a nobleman. The Lord Audley led them on from Wells to Salisbury, and from Salisbury to Winchester. Thence the English people, who, in effect, led their leaders, had a mind to be led into Kent, thinking that the people there would join

with them; contrary to all reason or judgment, considering the Kentish men had showed great loyalty and affection to the king so lately before. But the rude people had heard Flammock say, that Kent was never conquered, and that they were the freest people of England. And upon these vain notions they looked for great matters at their hands, in a cause which they conceived to be for the liberty of the subject. But when they were come into Kent, the country was so well settled, by the king's late kind usage towards them, and by the credit and power of the Earl of Kent, the Lord Abergavenny, and the Lord Cobham, as neither gentleman nor yeoman came to their aid, which did much damp and dismay many of the simpler sort; insomuch as divers of them did secretly fly from the army, and went home: but the sturdier sort, and those that were most engaged, stood by it, and rather waxed proud, than failed in hopes and courage. For as it did somewhat abate them, that the people came not in to them, so it did increase their courage, that the king's forces had not set upon them, having marched from the west unto the east of England. Wherefore they kept on their way, and encamped upon Blackheath, between Greenwich and Eltham, threatening either to bid battle to the king, for now the seas went higher than Morton and Bray, or to take London within his view; trusting with themselves there to find no less fear than wealth.

When therefore the rebels were encamped on Blackheath upon the hill whence they might behold the city of London and the fair valley about it; the king knowing well, that it stood him upon, by how much the more he had hitherto protracted the time in not encountering them, by so much the sooner to despatch with them, that it might appear to have been no coldness in fore-slowing, but wisdom in choosing his time; resolved with all speed to assail them, and yet with that provide and surety, as should leave little to venture or fortune. Having very great and puissant forces about him, the better to master all events and accidents, he divided them into three parts; the first was led by the Earl of Oxford in chief, assisted by the Earls of Essex and Suffolk. These noblemen were appointed, with some companies of horse and bands of foot, a good store of artillery, wheeling about to put themselves about the hill where the rebels were encamped; and to beset the skirts and descents thereof, except those that lay toward London; whereby to have these wild beasts, as it were, in a net. *The second part of his forces, which were those that were the most in action, and upon which he relied most for the*

tune of the day, he did assign to be led by the lord chamberlain, who was appointed to set upon the rebels in front, from that side which is towards London. The third part of his forces, being likewise great and brave forces, he retained about himself, to be ready upon all events to restore the fight, or consummate the victory; and meanwhile to secure the city. And for that purpose he encamped in person in Saint George's Fields, putting himself between the city and the rebels. But the city of London, specially at the first, upon the near encamping of the rebels, was in great tumult: as it useth to be with wealthy and populous cities, especially those which for greatness and fortune are queens of their regions, who seldom see out of their windows or from their towers, an army of enemies. But that which troubled them most, was the conceit, that they dealt with a rout of people, with whom there was no composition or condition, or orderly treating, if need were; but likely to be bent altogether upon rapine and spoil. And although they had heard that the rebels had behaved themselves quietly and modestly by the way as they went; yet they doubted much that would not last, but rather make them more hungry, and more in appetite to fall upon spoil in the end. Wherefore there was great running to and fro of people, some to the gates, some to the walls, some to the water-side: giving themselves alarms and panic fears continually. Nevertheless both Tate the lord mayor, and Shaw and Haddon the sheriffs, did their parts, stoutly and well, in arming and ordering the people. And the king likewise did adjoin some captains of experience in the wars to advise and assist the citizens. But soon after, when they understood that the king had so ordered the matter, that the rebels must win three battles, before they could approach the city, and that he had put his own person between the rebels and them, and that the great care was, rather how to impound the rebels that none of them might escape, than that any doubt was made to vanquish them; they grew to be quiet and out of fear; the rather for the confidence they reposed, which was not small, in the three leaders, Oxford, Essex, and D'Aubigny; all men well famed and loved amongst the people. As for Jasper, Duke of Bedford, whom the king used to employ with the first in his wars, he was then sick and died soon after.

It was the two and twentieth of June, and a Saturday, which was the day of the week the king fancied, when the battle was fought: though the king had, by all the art he could devise, given out a false day, as if he prepared to give

rebels battle on the Monday following, the better to find unprovided, and in disarray. The lords that were appointed to circle the hill, had some days before planted themselves at the receipt, in places convenient. In the afternoon, at the decline of the day, which was done the better to be rebels in opinion that they should fight that day, the D'Aubigny marched on towards them, and first beat troops of them from Deptford-bridge, where they fought fully; but being in no great number, were soon driven and fled up to their main army upon the hill. The earl at that time, hearing of the approach of the king's forces, putting themselves in array, not without much confidence. But neither had they placed, upon the first high ground towards the bridge, any forces to second the troops below, kept the bridge; neither had they brought forwards their battle, which stood in array far into the heath, near the ascent of the hill. So that the earl with his forces met the hill, and recovered the plain without resistance. The D'Aubigny charged them with great fury; inasmuch as he like, by accident, to have brandled the fortune of the day by inconsiderate forwardness in fighting in the head of troops, he was taken by the rebels, but immediately rescued and delivered. The rebels maintained the fight for a long time, and for their persons showed no want of courage, being ill armed, and ill led, and without horse or armour; they were with no great difficulty cut in pieces, and put to flight. And for their three leaders the Lord Audley, the Earl of Smith, and Flammoek, as commonly the captains of confederations are but half-couraged men, suffered themselves to be taken alive. The number slain on the rebels' part were two thousand men: their army amounting, as it is said, unto a number of sixteen thousand. The rest were, in effect, all taken for that the hill, as was said, was encompassed with the king's forces round about. On the king's part there died about a hundred, most of them shot with arrows, which were reported to be of the length of a tailor's yard: so strong and mighty bow the Cornish men were said to draw.

The victory thus obtained, the king created divers rejoicings, as well upon Blackheath, where his lieutenant had the field, whither he rode in person to perform the said ceremony as in St. George's Fields, where his own person had been camped. And for matter of liberality, he did, by his edict, give the goods of all the prisoners unto those that had taken them; either to take them in kind or compounded for.

aid. After matter of honour and liberality, followed severity and execution. The Lord Audley was led to Tower-hill, in a paper coat painted with his arms reversed, the coat torn, and he at Tower-hill. Flammoock and the blacksmith were hanged, and quartered at Tyburn: the blacksmith taking upon the hurdle, as it seemeth by words that he think that he should be famous in after-times. The king was once in mind to have sent down Flammoock and the blacksmith to have been executed in Cornwall, for the more to be advertised that the country was yet unquiet. But he thought better not to irritate the people further. The rebels were pardoned by proclamation, and to take out letters under seal, as many as would. So that, more than drawn in the field, the king did satisfy himself with the death of only three offenders, for the expiation of this great

Following extracts give us the conclusion of the Perkin:—

ing of Scotland, though he would not formally re-judgment of Perkin, wherein he had engaged himself. Perkin, in his private opinion, upon often speech with the king, and divers other advertisements, began to suspect himself counterfeit. Wherefore in a noble fashion he called to the king, and recounted the benefits and favours that he had done him in making him his ally, and in provoking a proud and opulent king by an offensive war in his quarrel, and in keeping him two years together; nay more, that he had re-honoured him with peace, whereof he had a fair offer, if he would have delivered him, and that, to keep his promise with him, he had deeply offended both his nobles and people whom he could not hold in any long discontent, and therefore recommended to him to think of his own fortunes, and to choose out some place for his exile: telling him withal, that he could not but see that the English had forsaken him before the Scottish, for in two several trials, none had declared themselves on his side. But nevertheless he would make good what he said to him at first receiving, which was that he should not repent putting himself into his hands; for that he would not cast him off, but help him with shipping and means to transport him whither he should desire. Perkin, not descending at all to the stage-like greatness, answered the king in few words,

that he saw his time was not yet come ; but whatsoever tunes were, he should both think and speak honour of. Taking his leave, he would not think on Flanders, it was but hollow ground for him since the treaty of the duke, concluded the year before ; but took his lady, followers as would not leave him, and sailed over land. . . .

All this while the rebellion of Cornwall, whereof spoken, seemed to have no relation to Perkin ; save that Perkin's proclamation had stricken upon the right vein missing to lay down exactions and payments, and so they took them now and then have a kind thought on Perkin ; now these bubbles by much stirring began to meet, as to do upon the top of water. The king's lenity, by the Cornish rebels who were taken and pardoned, was said, many of them sold by them that had taken twelve pence and two shillings a piece, were come to their country, had rather emboldened them than hurt them ; insomuch as they stuck not to say to their men and countrymen, that the king did well to pardon ; that he knew he should leave few subjects in England, hanged all that were of their mind, and began whispering one another to renew the commotion. Some subtlest of them, hearing of Perkin's being in Ireland, means to send to him to let him know, that if he would come over to them they would serve him.

When Perkin heard this news, he began to be agitated, and advised upon it with his council, which consisted principally three : Herne, a mercer that had fled for debt ; a tailor, and Astley, a scrivener ; for Secretary Friar. These told him, that he was mightily overseen, both when he went into Kent, and when he went into Scotland, being a place so near London, and under the king's eye ; the other a nation so distasted with the people of England, if they had loved him never so well, yet they could not have taken his part in that company. But if he had been as to have been in Cornwall at the first, when the people were to take arms there, he had been crowned at Westminster this time. For, these kings, as he had now experienced, sell poor princes for shoes. But he must rely upon the people ; and therefore advised him to sail over with speed into Cornwall, which accordingly he did, having company four small barks, with some six score or so fighting men. He arrived in September at Weymouth.

and forthwith came to Bodmin, the blacksmith's town; where he assembled unto him to the number of three thousand men of the rude people. There he set forth a new proclamation, hooking the people with fair promises, and humouring them with invectives against the king and his government. And as it fareth with smoke, that never loseth itself till it be at the highest; he did now before his end raise his style, entitling himself no more Richard, Duke of York, but Richard the Fourth, King of England. His council advised him by all means to make himself master of some good walled town; as well to make his men find the sweetness of rich spoils, and to allure to him all loose and lost people, by like hopes of booty; as to have a sure retreat to his forces, in case they should have any ill day, or unlucky chance in the field. Wherefore they took heart to them, and went on, and besieged the city of Exeter, the principal town for strength and wealth in those parts. . .

Perkin, hearing this thunder of arms, and preparations against him from so many parts, raised his siege, and marched to Taunton, beginning already to squint one eye upon the town and another upon the sanctuary; though the Cornish men were become, like metal often fired and quenched, churlish, and that would sooner break than bow, swearing and vowing not to leave him, till the uttermost drop of their blood were spilt. He was at his rising from Exeter between six and seven thousand strong, many having come unto him after he was set before Exeter, upon fame of so great an enterprise, and to partake of the spoil, though upon the raising of his siege some did slip away. When he was come near Taunton, he dissembled all fear, and seemed all the day to use diligence in preparing all things ready to fight. But about midnight he fled with three score horse to Bewdley in the New Forest, where he and divers of his company registered themselves sanctuary-men, leaving his Cornish men to the four winds, but yet thereby easing them of their vow, and using his wonted compassion, not to be by when his subjects' blood should be spilt. The king, as soon as he heard of Perkin's flight, sent presently five hundred horse to pursue and apprehend him, before he should get either to the sea, or to that same little island called a sanctuary. But they came too late for the latter of these. Therefore all they could do, was to beset the sanctuary, and to maintain a strong watch about it, till the king's pleasure were further known. As for the rest of the rebels, they, being destituted of their head, without stroke stricken, sub-

mitted themselves unto the king's mercy. And the king commonly drew blood, as physicians do, rather to save than to spill it, and was never cruel when he was secure: when he saw the danger was past, pardoned them all in the end, except some few desperate persons, which he reserved to be the better to set off his mercy towards the rest. The king also sent with all speed some horse to St. Michael in Cornwall, where the Lady Catharine Gordon was her husband, whom in all fortunes she entirely loved, for the virtues of a wife to the virtues of her sex. The king was in the greater diligence, not knowing whether she was with child, whereby the business would not have been of Perkin's person. When she was brought to the king, he commonly said, that the king received her not only with passion, but with affection; pity giving more impression of her excellent beauty. Wherefore comforting her, to serve his eye as his fame, he sent her to his queen to remain with her; giving her very honourable allowance for the maintenance of her estate, which she enjoyed both during the king's life, and many years after. The name of the white rose, which had been given to her husband's false title, was continued in common speech to her true beauty. . . .

The king did also, while he was at Exeter, appoint Lord Darcy, and others, commissioners, for the finding out such as were of any value, or had any hand or part in the aid or comfort of Perkin, or the Cornish men, either in the field or in the flight.

These commissioners proceeded with such strict severity, as did much obscure the king's mercy in the shedding of blood, with the bleeding of so much treasure. Perkin was brought on to the king's court, but not to the king's presence, though the king, to satisfy his curiosity, saw him once out of a window, or in passage. He was in shew at that time guarded with all care and watch that was possible, and was willing to follow the king to London. But from his appearance upon the stage, in his new person of a sycophant and juggler, instead of his former person of a prince, all men might think how he was exposed to the derision not only of the courtiers but also of the common people, who flocked about him as he went along: that one might know afar off where he was by the flight of birds; some mocking, some with some cursing, some prying and picking matter of his countenance and gesture to talk of: so that the false

all respects, which he had so long enjoyed, was plentifully repaid in scorn and contempt. As soon as he was come to London, the king gave also the city the solace of this May-game; and he was conveyed leisurely on horseback, but not in any sumptuous fashion, through Cheapside and Cornhill, to the Tower, and from thence back again unto Westminster, with the harm of a thousand taunts and reproaches. But to amend the show, there followed a little distance of Perkin, an inward counsellor of his, one that had been serjeant farrier to the king. This fellow, when Perkin took sanctuary, chose rather to take a holy habit than an holy place, and clad himself like an hermit, and in that weed wandered about the country, till he was discovered and taken. But this man was bound hand and foot upon the horse, and came not back with Perkin, but was left at the Tower, and within few days after executed. Soon after, now that Perkin could tell better what himself was, he was diligently examined; and after his confession taken, an extract was made of such parts of them as were thought fit to be divulged, which was printed and dispersed abroad; wherein the king did himself no right; for as there was a laboured tale of particulars, of Perkin's father and mother, and grandfathers and grandmother, and uncles and cousins, by names and surnames, and from what places he travelled up and down; so there was little or nothing to purpose of anything concerning his designs, or any practices that had been held with him; nor the Duchess of Burgundy herself, that all the world did take knowledge of, as the person that had put life and being into the whole business; so much as named or pointed at. So that men missing of that they looked for, looked about for they knew not what, and were in more doubt than before; but the king chose rather not to satisfy, than to kindle coals. . . .

It was not long but Perkin, who was made of quicksilver, which is hard to hold or imprison, began to stir. For deceiving his keepers, he took him to his heels, and made speed to the sea-coasts. But presently all corners were laid for him, and such diligent pursuit and search made, as he was fain to turn back, and get him to the house of Bethlehem, called the priory of Sheen (which had the privilege of Sanctuary), and put himself into the hands of the prior of that monastery. The prior was thought an holy man, and much revered in those days. He came to the king, and besought the king for Perkin's life only, leaving him otherwise to the king's discretion. Many about the king were again more hot than ever, to have the king take him forth and hang him. But the king, that had

an high stomach, and could not hate any that he despised, he said, "Take him forth, and set the knave in the stocks;" and promising the prior his life, he caused him to be brought forth. And within two or three days after, upon a scaffold set up in the palace court at Westminster, he was fettered and set in the stocks for the whole day. And the next day after, the like was done by him at the cross in Cheapside, and in both places read his confession, of which we made mention before, and was from Cheapside conveyed and laid up in the Tower.

But it was ordained, that this winding-ivy of a Plantagenet should kill the true tree itself. For Perkin, after he had been a while in the Tower, began to insinuate himself into the favour and kindness of his keepers, servants to the lieutenant of the Tower, Sir John Digby, being four in number; Strangewas, Blewet, Astwood, and Long Roger. These varlets, with mountains of promises, he sought to corrupt, to obtain his escape; but knowing well, that his own fortunes were made so contemptible, as he could feed no man's hopes, and by hopes must work, for rewards he had none, he had contrived with himself a vast and tragical plot; which was, to draw into his company Edward Plantagenet, Earl of Warwick, then prisoner in the Tower; whom the weary life of a long imprisonment, and the often and renewing fears of being put to death, had softened to take any impression of counsel for his liberty. This young prince he thought these servants would lay upon, though not upon himself, and therefore, after that he had some message by one or two of them, he had tasted of the Earl's consent; it was agreed that these four should murder their master, the lieutenant, secretly, in the night, and make their best of such money and portable goods of his, as they should find ready at hand, and get the keys of the Tower, and presently let forth Perkin and the Earl. But this conspiracy was revealed in time, before it could be executed. And in this again the opinion of the king's great wisdom did surcharge him with a sinister fame, that Perkin was but his bait, to entrap the Earl of Warwick. And in the very instant while this conspiracy was in working, as if that also had been the king's industry, it was fatal, that there should break forth a counter-plot. The Earl of Warwick, a cordwainer's son, whose name was Ralph Wilford; a young man taught and set on by an Augustinian friar, called Patrick. They both from the parts of Suffolk came forwards into Kent, where they did not only privately and underhand give out that this Wilford was the true Earl of Warwick, but also the friar, finding some light credence in

, took the boldness in the pulpit to declare as much, and to the people to come in to his aid. Whereupon they were presently apprehended, and the young fellow executed, the friar condemned to perpetual imprisonment. This happening so opportunely, to represent the danger to the estate from the Earl of Warwick, and thereby to colour the king's severity that followed; together with the madness of him so vainly and desperately to divulge a treason, before he gotten any manner of strength: and the saving of the life, which nevertheless was, indeed, but the privilege of his rank, and the pity in the common people, which if it run in a stream, doth ever cast up scandal and envy, made it generally rather talked than believed that all was but the king's default; but howsoever it were, hereupon Perkin, that had offended the king's grace now the third time, was at the last proceeded against by commissioners of oyer and determiner, arraigned at Westminster, upon diverse treasons committed and perpetrated by him coming on land, within this kingdom, for so the judges found him, for that he was a foreigner, and condemned, and a year after executed at Tyburn; where he did again openly make a confession, and take it upon his death to be true. This was the end of this little cockatrice of a king, that was able to overcome those that did not espy him first. It was one of the best plays of that kind that hath been in memory, and might have had another end, if he had not met with a king more wise, stout, and fortunate.

I can only, in addition, afford room for the conclusion of the work, containing the character of King Richard:—

Richard, to speak of him in terms equal to his deserving, is one of the best sort of wonders—a wonder for wise men. He parts both in his virtues and his fortune, not so fit for admiration as for observation. Certainly he was religious, and his affection and observance. But as he could see the danger for those times, through superstition, so he would be guided, now and then, by human policy. He advanced the poor men; he was tender in the privilege of sanctuaries, but they wrought him much mischief. He built and endowed many religious foundations, besides his memorable house of the Savoy; and yet was he a great alms-giver in secret, *showed that his works in public were dedicated rather to glory than his own.* He professed always to love and

seek peace; and it was his usual preface in his treatise, that when Christ came into the world peace was sung, and when he went out of the world peace was bequeathed. And that virtue could not proceed out of fear or softness, for he was valiant and active, and therefore no doubt it was truly Christian and moral. Yet he knew the way to peace was not to seem to be desirous to avoid war; therefore would he make oft and tames of wars till he had mended the conditions of peace. It was also much, that one that was so great a lover of peace should be so happy in war. for his arms, either in foreign or civil wars, were never infortunate, neither did he know what disaster meant. The war of his coming in, and the rebellion of the Earl of Lincoln and the Lord Audley, were ended in victory; the wars of France and Scotland, by peace sought in his hands; that of Britain by accident of the duke's death; the insurrection of the Lord Lovel, and that of Perkin at Exeter in Kent, by flight of the rebels before they came to blows. That his fortune of arms was still inviolate; the rather so for that in the quenching of the commotions of his subjects, he never went in person; sometimes reserving himself to back a second his lieutenants, but ever in action; and yet that was not merely forwardness, but partly distrust of others.

He did much maintain and countenance his laws, which nevertheless, was no impediment to him to work his will; it was so handled that neither prerogative nor profit went to diminution. And yet as he would sometimes strain up his law to his prerogative, so he would also let down his prerogative to his parliament; for mint, and wars, and martial discipline, things of absolute power, he would nevertheless bring to parliament. Justice was well administered in his time, save where the king was party; save also that the council table intermeddled too much with "meum" and "tuum." For it was a very court of justice during his time, especially in the beginning; but in that part both of justice and policy which is a durable part, and cut, as it were, in brass or marble, where in the making of good laws, he did excel. And with justice he was also a merciful prince; as in whose time there were but three of the nobility that suffered—the Earl of Warwick, the Lord Chamberlain, and the Lord Audley; though the first two were, instead of numbers, in the dislike and obloquy of the people. But there were never so great rebellions repaired with so little blood drawn by the hand of justice as the two rebellions of Blackheath and Exeter. As for the several wars upon those which were taken in Kent, it was but a war

of people. His pardons went ever both before and after his sword. But then he had withal a strange kind of interchanging of large and unexpected pardons with severe executions, which, his wisdom considered, could not be imputed to any inconstancy or inequality, but either to some reason which we do not now know, or to a principle he had set unto himself, that he would vary and try both ways in turn. But the less blood he drew, the more he took of treasure: and, as some construed it, he was the more sparing in the one that he might be the more pressing in the other, for both would have been intolerable. Of nature assuredly he coveted to accumulate treasure, and was a little poor in admiring riches. The people, into whom there is infused, for the preservation of monarchies, a natural desire to discharge their princes, though it be with the unjust charge of their counsellors and ministers, did impute this unto Cardinal Morton and Sir Reginald Bray, who, as it after appeared, as counsellors of ancient authority with him, did so second his humours, as nevertheless they did temper them. Whereas Empson and Dudley that followed, being persons that had no reputation with him, otherwise than by the servile following of his bent, did not give way only as the first did, but shape him way to those extremities, for which himself was touched with remorse at his death, and which his successor renounced and sought to purge. This excess of his had at that time many glosses and interpretations. Some thought the continual rebellions wherewith he had been vexed had made him grow to hate his people; some thought it was done to pull down their stomachs, and to keep them low; some, for that he would leave his son a golden fleece; some suspected he had some high design upon foreign parts; but those perhaps shall come nearest the truth that fetch not their reasons so far off, but rather impute it to nature, age, peace, and a mind fixed upon no other ambition or pursuit. Whereunto I should add, that having every day occasion to take notice of the necessities and shifts for money of other great princes abroad, it did the better, by comparison, set off to him the felicity of full coffers. As to his expending of treasure, he never spared charge which his affairs required; and in his buildings was magnificent; but his rewards were very limited, so that his liberality was rather upon his own state and memory than upon the deserts of others.

He was of an high mind, and loved his own will and his own way, as one that revered himself and would reign indeed. Had he been a private man he would have been termed proud; but in a wise prince it was but keeping of distance, which

indeed he did towards all, not admitting any near or full approach neither to his power or to his secrets, for he was governed by none. His queen, notwithstanding she had presented him with divers children, and with a crown also, though he would not acknowledge it, could do nothing with him. His mother he revered much, heard little; for any person agreeable to him for society, such as was Hastings to King Edward the Fourth, or Charles Brandon after to King Henry the Eighth he had none; except we should account for such persons Fox, and Bray, and Empson, because they were so much with him. But it was but as the instrument is much with the workman. He had nothing in him of vain glory, but yet kept state and majesty to the height; being sensible that majesty makes the people bow, but vain glory boweth to them.

To his confederates abroad he was constant and just, but not open; but rather such was his inquiry, and such his closeness, as they stood in the light towards him, and he stood in the dark to them. Yet without strangeness, but with a semblance of mutual communication of affairs. As for little envy or emulations upon foreign princes, which are frequent with many kings, he never had many, but went substantially to his own business. Certain it is that though his reputation was great at home, yet it was greater abroad. For foreigners that could not see the passages of affairs, but made their judgments upon the issue of them, noted that he was ever in strife, and ever aloft. It grew also from the airs which the princes and states abroad received from their ambassadors and agents here, which were attending the court in great number, whom he did not only content with courtesy, reward, and privateness, but, upon conferences as passed with them, put them in admiration of his universal insight into the affairs of the world; which though he did suck chiefly from themselves, yet that which he had gathered from them all seemed admirable to every one, that they did write ever to their superiors in high terms concerning his wisdom and art of rule, nay, when they were returned, they did commonly maintain intelligence with him, such a dexterity he had to appropriate to himself all foreign instruments.

He was careful and liberal to obtain good intelligence from all parts abroad; wherein he did not only use his interest, the liegers here, and his pensioners, which he had both in the court of Rome and other the courts of Christendom, but the industry and vigilancy of his own ambassadors in foreign parts: for which purpose his instructions were ever exten-

and articulate; and in them more articles touching than touching negotiation, requiring likewise from ambassadors an answer in particular and distinct articles to his questions.

For his secret spies, which he did employ both at home and abroad, by them to discover what practices and conspiracies against him, surely his case required it, he had such perpetually working and casting to undermine him, it can it be reprehended; for if spies be lawful against enemies, much more against conspirators and traitors. He used to give them credence by oaths or curses, that cannot well be maintained, for those are too holy vestments for a man. Yet surely there was thus further good in his employment of these spies and familiars; that as the use of them was such that many conspiracies were revealed, so the same suspicion of them kept, no doubt, many conspiracies from attempted.

Towards his queen he was nothing uxorious, and scarce inconstant; but companionable and respectful, and without jealousy.

Towards his children he was full of paternal affection, and diligent of their education, aspiring to their high advancement, desiring to see that they should not want of any due honour and estate, but not greatly willing to cast any popular lustre upon

his council he did refer much, and sat oft in person, leaving it to be the way to assist his power and inform his counsel. In which respect also he was fairly patient of dissent, both of advice and of vote, till himself were declared. He put a strait hand on his nobility, and chose rather to advise with the clergy and lawyers, which were more obsequious to him, than to the nobles, which had less interest in the people, which made for his safety but not for his safety; insomuch as, I am persuaded, it was one of the causes of his troublesome reign; for the nobles, though they were loyal and obedient, yet did not operate with him, but let every man go his own way. He was not afraid of an able man, as Lewis the Eleventh was; contrariwise, he was served by the ablest men that were to be found, without which his affairs could not have prospered as he did. For war, Bedford, Oxford, Surrey, D Aubigny, John de Poyning; for other affairs, Morton, Fox, Bray, the Bishop of Lanthony, Warham, Urewick, Hussey, Frowick, and others. Neither did he care how cunning they were that he did employ, for he thought himself to have the master-reach. And these well, so he beld them up well; for it is a strange

thing, that though he were a dark prince, and infinitely suspicious, and his times full of secret conspiracies and troubles, yet in twenty-four years' reign he never put down or disposed counsellor, or near servant, save only Stanley, the chamberlain. As for the disposition of his subjects general towards him, it stood thus with him; that of the affections which naturally tie the hearts of the subjects to the sovereign, love, fear, and reverence, he had the last in himself the second in good measure, and so little of the first as was befitting to the other two.

He was a prince sad, serious, and full of thoughts and secret observations, and full of notes and memorials of his hand, especially touching persons. As, whom to employ, whom to reward, whom to inquire of, whom to beware of, what were the dependencies, what were the factions, and like, keeping, as it were, a journal of his thoughts. There to this day a merry tale, that his monkey, set on, as it thought, by one of his chamber, tore his principal note-book all to pieces, when by chance it lay forth; whereat the court which liked not those pensive accounts, was almost tickled with sport.

He was indeed full of apprehensions and suspicions, but he did easily take them, so he did easily check them and master them, whereby they were not dangerous, but troubled him more than others. It is true, his thoughts were so many, they could not well always stand together; but that which did good one way, did hurt another: neither did he at such times weigh them aright in their proportions. Certainly, the rumour which did him so much mischief, that the Duke of York should be saved and alive, was, at the first, of his nourishing, because he would have more reason not to reign right of his wife. He was affable and both well and ill spoken, and would use strange sweetness and blandishment of words where he desired to effect or persuade anything that took to heart. He was rather studious than learned, reading most books that were of any worth in the French tongue; he understood the Latin, as appeareth in that Cardinal Hadrian and others, who could very well have written French, did not so write to turn in Latin.

For his pleasures, there is no news of them; and yet by instructions to Marsin and Stile, touching the Queen of Naples, it seemeth he could interrogate well touching beauty. He took pleasures as great princes do by banquets, came and left little upon them, and turn away. For never prince was

given to his affairs, nor in them more of himself; inso-
much in triumphs of jousts, and tourneys, and balls, and
which they then called disguises, he was rather a
gentle and gentle spectator, than seemed much to be de-

doubt, in him, as in all men, and most of all in kings,
and wrought upon his nature, and his nature upon his
. He attained to the crown not only from a private for-
tune might endow him with moderation, but also from
that of an exiled man, which had quickened in him all
observation and industry. And his times, being rather
rest than calm, had raised his confidence by success,
not marred his nature by troubles. His wisdom, by
escaping from perils, was turned rather into a dexterity to
keep himself from dangers, when they pressed him, than
providence to prevent and remove them afar off. And
his nature, the sight of his mind was like some sights of
rather strong at hand than to carry afar off; for his wit
was upon the occasion, and so much the more if the occa-
sion sharpened by danger. Again, whether it were the
effect of his foresight, or the strength of his will, or the
effect of his suspensions, or what it was—certain it is, that
the perpetual troubles of his fortunes, there being no more matter
which they grew, could not have been without some great
and main errors in his nature, customs, and proceedings,
he had enough to do to save and help with a thousand
industries and watches. But those do best appear in the
self. Yet take him with all his defects, if a man should
compare him with the kings his concurrents in France and
he shall find him more politic than Lewis the Twelfth
himself, and more entire and sincere than Ferdinando of
Castile; but if you shall change Lewis the Twelfth for Lewis
the Thirteenth, who lived a little before, then the consort is more
; for that Lewis the Eleventh, Ferdinando, and Henry,
esteemed for the “tres magi” of kings of those ages. To
do, if this king did no greater matters, it was long of
him; for what he minded, he compassed.

He was a comely personage, a little above just stature,
and straight limbed, but slender. His countenance was
fair, and a little like a churchman; and as it was not
very dark, so neither was it winning or pleasing, but as
the face of one well disposed; but it was to the disadvantage
of the painter, for it was best when he spake.

His youth may bear a tale or two, that may put upon him

somewhat that may seem divine. When the Lady Margaret his mother, had divers great suitors for marriage, she dreamed one night that one in the likeness of a bishop, in pontifical habit, did tender her Edmund, Earl of Richmond, the king's father, for her husband, neither had she ever any child but the king, though she had three husbands. One day when King Henry the Sixth, whose innocency gave him holiness, was washing his hands at a great feast, and cast his eye upon King Henry, then a young youth, he said, "This is the lad that shall possess quietly that that we now strive for." But that that was truly divine in him, was that he had the fortune of a true Christian as well as of a great king, in living exercised and dying repentant, so as he had an happy warfare in both conflicts, both of sin and the cross.

He was born at Pembroke Castle, and lieth buried at Westminster in one of the stateliest and daintiest monuments of Europe, both for the chapel and for the sepulchre. So that he dwelleth more richly dead, in the monument of his tomb, than he did alive in Richmond, or any of his palaces. I could wish he had the like in this monument of his fame.

Other expressions of Bacon's, as well as these last words, indicate sufficiently his own estimation of this remarkable work. In a letter, for instance, sent with a presentation copy to the Queen of Bohemia, he writes—"If King Henry the Seventh were alive again, I hope verily he would not be so angry with me for not flattering him, as well pleased in seeing himself so truly described in colours that will last and be believed." So in another letter written about the same time or shortly after to Bishop Andrews, he says, "Now being, as I am, no more able to do my country service, it remained unto me to do it honour, which I have endeavoured to do in my work of the reign of King Henry the Seventh." And we have seen his anxiety to have the work translated into Latin, in the hope, as he expresses it in his letter to Matthew, that, since he had lost much time with his own age, he might thereby recover it with posterity.

This was not the only historical work in which the spirited and hopeful old man engaged after his loss of office. We have also from his pen the commencement of a *History of the Reign of Henry the Eighth*, first printed

in the *Miscellany Works*, published by Rawley, in 4to at London, in 1629. "This work," says Tenison, "I undertook upon the motion of King Charles the First, but, a greater king not lending him time, he only began it, for that which we have of it was, it seems, but of morn'ng's work." It appears, however, that the work was actually commenced, or at least undertaken, while Charles was still prince. Writing to Buckingham, then at Madrid, on the 21st of February, 1623, we find him thus expressing himself:—"I beseech your lordship, your nobleness, vouchsafe to present my most humble duty to his highness, who I hope ere long will make leave King Henry the Eighth, and set me on work in relation of his highness's adventures." And in a letter sent to the prince, with a copy of the *De Augmentis Scientiarum*, in the latter part of the same year, he writes—"For Henry the Eighth, to deal truly with your highness, I did so despair of my health this summer, as I was glad to choose some such work as I might complete within days, so far was I from entering into a work of length. Your highness's return hath been my restoration. When I shall wait upon your highness, I shall give you a farther account." The fragment that remains is striking but very short, and can scarcely be all that was prepared.

And there is a longer fragment, entitled *The Beginning of the History of Great Britain* (or of the kingdom from the union of the crowns), which is also very spirited. This is evidently the performance about which we have a letter in the *Resuscitatio* (Part I. 3rd edit. p. 26) headed 'A Letter to the King, upon the sending unto him a Beginning of an History of his Majesty's Time.' The letter is without date, but it was probably written 1624. The portion of the work sent with the letter is described as "but a leaf or two."

* But Mr. Montagu is quite mistaken in supposing another longer letter in the same collection (p. 24, headed 'A Letter to the Lord Chanceller touching the History of Britain,' which he quotes in his bibliographical Preface.

There are two short biographical sketches, or rather characters, by Bacon, one of Julius Cæsar, the other of Augustus, which may be classed with his historical writings. Both were written by him in Latin; and the

all Stephens's annotations, to the extent of nearly half a dozen pages, relates to the same work. The History of Great Britain there spoken of is another project altogether—a history of the two kingdoms of England and Scotland *before* the accession of James. “I conceived,” Bacon writes, “it would be honour for his majesty, and a work very memorable, if this island of Great Britain, as it is now joined in monarchy for the ages to come, so it were joined in history *for the times past*, and the one just and complete history were compiled of both nations. The letter is undated; but it was evidently written not at the close, but in the earlier part of James’s reign, and the lord chancellor to whom it is addressed was not, as Mr. Montagu appears to assume, Bacon’s successor in the great seal, William Williams (who, by the bye, never had the title of chancellor, but his predecessor, Lord Ellesmere. Instead of having been written by Bacon at the end of his life and after his loss of office, it was most probably written before he had even become Solicitor-General. There is no allusion in it to his ever having held any public employment. “For all this while,” he says towards the close, “I assure myself I cannot be mistaken in your lordship, as if I sought an office or employment for myself; for no man knows better than your lordship, that, if there were in me any faculty thereunto, yet neither my course of life or profession would permit it.” So that he does not even propose himself for the writer of the work. And would he have spoken of himself as known to have no faculty for historical writing, after the publication of his *Henry the Seventh*? But to put the point beyond dispute, it is only necessary to observe that a considerable part of the letter, recounting the course of events from the time of Henry the Eighth, is evidently the germ of a remarkable passage in the second book of the *Advancement of Learning*, which was published in 1605. The letter was therefore written in or before that year. Since the note was written, we find the letter, for the first time correctly printed from the original, in Mr. Collier’s learned and valuable “*Catalogue of the Library at Bridgewater House*,” 4to., London, 1837; and the date turns out to be “Gray’s Inn, 2nd April 1603.”

als were first published by Rawley, in the *Opuscula Posthuma*, 8vo. Lond. 1658. English translations both had been given by Rawley the year before in the 1st Part of the *Resuscitatio*. And there are also two eulogies on Queen Elizabeth; one written in English, the other in Latin; and a shorter piece entitled *The Praise of Henry Prince of Wales*. The following are extracts from the English eulogy on Elizabeth, first published by Stephens in 1734, with the title of 'Mr. Bacon's course in the Praise of His Sovereign:—

No praise of magnanimity, nor of love, nor of knowledge, can receive her praise, that planteth and nourisheth magnanimity by her example, love by her person, and knowledge by the peace and serenity of her times. And if these rich pieces be so fair unset, are they set, and set in all perfection? Magnanimity not only consisteth in contempt of peril, in contempt of profit, and in bearing of the times wherein one liveth. For contempt of peril, see a lady that cometh to a crown after the experience of an adverse fortune, which for the most part extenuateth the crown, and maketh it apprehensive of fears. No sooner she putteth the sceptre into her sacred hands, but she putteth on a resolution to make the greatest, the most important, the most dangerous alteration that can be in a state, the alteration of religion. This she doth, not after a sovereignty established and continued by sundry years, when custom might have bred in the people a more absolute obedience; when trial of her servants might have made her more assured whom to employ; when the reputation of her policy and virtue might have made her government redoubted, but at the very entrance of her reign, when she was green in authority, her servants scant known unto her, her adverse part not weakened, her own part not confirmed. And yet she doth she reduce or reunite her realm to the religion of her fathers: states about her, that the evil inclination of the subject might be countervailed by the good correspondence in foreign states: but contrariwise, she introduceth a religion exterminated and persecuted both at home and abroad. Her proceeding is not by degrees and by stealth, but absolute and at once. Was she encouraged thereto by the strength she found in leagues and alliances with great and potent confederates? but she found her realm in wars with her nearest and might-neighbours. She stood single and alone, and in league only

with one, that after the people of her nation had made his war, left her to make her own peace, one that could never be by any solicitation moved to renew the treaties, and one that since hath proceeded from doubtful terms of amity to the highest act of hostility. Yet, notwithstanding the opposition so great, the support so weak, the season so improper; yet, I say, because it was a religion wherein she was nourished and brought up; a religion that freed her subjects from pretence of foreign power, and, indeed, the true religion, she brought to pass this great work with success worthy so noble a resolution. See a queen that, when a deep and secret conspiracy was plotted against her sacred person, practised by subtle instruments, embraced by violent and desperate humours, strengthened and bound by vows and sacraments, and the same was revealed unto her (and yet the nature of the affairs required farther ripening before the apprehension of any of the parties), was content to put herself into the guard of the Divine Providence, and her own prudence, to have some of the conspirators in her eyes, to suffer them to approach to her person, to take a petition of the hand that was conjured for her death, and that with such majesty of countenance, such mildness and serenity of gesture, such art and impression of words, as had been sufficient to have repressed and bound the hand of a conspirator if he had not been discovered. Lastly, see a queen, that when her realm was to have been invaded by an army, the preparation whereof was like the travel of an elephant, the provisions whereof were infinite, the setting forth whereof was the terror and wonder of Europe; it was not seen that her cheer, her fashion, her ordinary manner was anything altered: not a cloud of that storm did appear in that countenance wherein peace doth ever shine; but with excellent assurance, and advised security, she inspired her council, animated her nobility, redoubled the courage of her people, still having this noble apprehension, not only that she would communicate her fortune with them, but that it was she that would protect them, and not they her: which she testified by no less demonstration than her presence in camp. Therefore that magnanimity that neither feareth greatness of alteration, nor the views of conspirators, nor the power of enemy, is more than heroical. . . .

The opulency of the peace such, as if you have respect, to take one sign for many, to the number of fair houses that have been built since her reign, as Augustus said "that he had received the city of brick, and left it of marble;" so she may say she received it a realm of cottages, and hath made it a realm

of palaces : the state of traffic great and rich : the customs, notwithstanding these wars and interruptions, not fallen : many profitable trades, many honourable discoveries : and lastly, to make an end where no end is, the shipping of this realm so advanced, and made so mighty and potent, as this island is become, as the natural site thereof deserved, the lady of the sea : a point of so high consequence, as it may be truly said, that the commandment of the sea is an abridgment or a quintessence of a universal monarchy . . .

Lastly, to touch the mighty general merit of this queen, be in mind that her benignity and beneficence hath been as large as the oppression and ambition of Spain. For to begin with the church of Rome, that pretended apostolic see is become but a donative cell of the King of Spain ; the vicar of Christ is become the King of Spain's chaplain ; he parteth the coming of the new Pope for the treasure of the old : he was wont to exclude but some two or three cardinals, and to leave the election of the rest ; but now he doth include, and present directly some small number, all incapable and incompatible with the conclave, put in only for colour, except one or two. The state of Italy, they be like little quillets of freehold being intermixed in the midst of a great honour or lordship. France is turned upside down, the subject against the king, cut and mangled infinitely, a country of Rodomonts and Royetelets, farmers of the ways : Portugal usurped by no other title than strength at vicinety : the Low Countries warred upon, because he seeketh not to possess them, for they were possessed by him before, but to plant there an absolute and martial government, and to suppress their liberties : the like at this day attempted upon Arragon : the poor Indies, whereas the Christian religion generally brought enfranchisement of slaves in all places where it came, in a contrary course are brought from freemen to be slaves, as slaves of most miserable condition : sundry trains and practices of this king's ambition in Germany, Denmark, Scotland, the east towns, are not unknown. Then it is her government, as her government alone, that hath been the scone and fort of a Europe, which hath let this proud nation from overrunning all. If any state be yet free from his factions erected in the bowels thereof ; if there be any state under his protection upon whom he usurpeth not ; if there be any subject to him that enjoys moderate liberty, upon whom he tyrannizeth not ; let them know, it is by the mercy of this renowned queen, that standeth between them and their misfortunes. There be some of her beams of noble and radiant magnanimity, in contempt of y

which so manifestly, in contempt of profit which so many imagine, and in merit of the world which so many incline themselves; set forth in my simplicity of speech, with a loss of lustre, but with near approach of truth; as the sun seen in the water. . . .

If this be presumption, let him bear the blame that of the verses. What shall I speak of her rare qualities of countenance; which as they be excellent in the things themselves they have always besides 'somewhat of a queen,' and as they use shadows and veils with their rich apparel, methinks in her qualities there is somewhat that flieth from ostentation, yet inviteth the mind to contemplate her more.

What should I speak of her excellent gift of speech, and a character of the greatness of her conceit, the height of degree, and the sweetness of her nature? What life, what is there in those words and glances wherewith at pleasure can give a man long to think; be it that she mean to delight him, to encourage him, or to amaze him! How admirable is her discourse, whether it be in learning, state, or law. What variety of knowledge, what rareness of conceit, choice of words, what grace of utterance! Doth it not appear that though her wit be as the adamant of excellences, yet draweth out of any book ancient or new, out of any writing or speech, the best, yet she refineth it, she enricheth it far above the value wherein it is received? And is her speech only language which the child learneth with pleasure, and not which the studious learn with industry? Hath she not attended besides her rare eloquence in her own language, infinitely laboured since her happy times, changes of her language learned and modern? So that she is able to negotiate with all ambassadors in their own languages; and that with no advantage unto them, who I think cannot but have a great deal of their wits distracted from their matters in hand to the temptation and admiration of such perfections. What shall I wander on to speak of the excellences of her nature, which cannot endure to be looked on with a discontented eye: of the constancy of her favours, which maketh service as a journey by land, whereas the service of other princes is like an emigration by sea. For her royal wisdom and policy of government, he that shall note and observe the prudent temper she uses in admitting access; of the one side maintaining the majesty of her degree, and on the other side not prejudicing herself by looking to her estate through too few windows; her exact judgment in choosing and finding good servants, a policy

reformer : her profound discretion in assigning and applying every of them to their aptest employment : her true sight in discovering every man's ends and drifts : her wonderful art in keeping servants in satisfaction, and yet in their duty : her inventing wit in contriving plots and overturns : her caution in censuring the propositions of others for her : her foreseeing events : her usage of occasions :—he will consider of these, and other things that may not well be hid, as he shall never cease to wonder at such a queen, and will wonder the less, that in so dangerous times, when passions so cunning, humours extravagant, passions so violent, options so great, the dissimulations so deep, factions so she hath notwithstanding done such great things, and in felicity.

Speak of her fortune, that which I did reserve for a garb her honour ; and that is, that she liveth a virgin, and without children ; so it is that which maketh all her other virtuous acts more sacred, more august, more divine. Let us have children that leave no other memory in their times. *rum eternitas, soboles.*" Revolve in histories the memory of happy men, and you shall not find any of rare felicity either he died childless, or his line spent soon after his death, or else was unfortunate in his children. Should a man seem to be slain by his vassals, as the posthumus of Alexander the Great was ? or to call them his imposthumes, as Julius Caesar called his ? Peruse the catalogue : Cornelia, Julius Caesar, Flavius Vespasianus, Severus, Constantine the Great, and many more. "*Generare et liberi, lucrare et operari, divina.*"

In the Low Countries, the Lammas-day, the retreat of Ghent, the festival of Zutphen, and the prosperous progress of this summer bravado in Portugal, and the honourable exploits in the service of the French king, besides the memorable voyages in the East ; and lastly, the good entertainment of the invincible navy, which was chased till the chasers were weary, after long loss, without taking a cock-boat, without firing a shot, and on the mercies of the wind and the discretion of their pilots, making a perambulation or pilgrimage about the coast of the seas, and ignobling many shores and points of land and wreck ; and so returned home with scorn and dishonour greater than the terror and expectation of their setting

her virtues and perfections, with so great felicity, have won the honour of her times, the admiration of the world,

the suit and aspiring of greatest kings and princes, who durst never have aspired unto her, but as their minds were raised by love.

But why do I forget that words do extenuate and embay matters of so great weight? Time is her best commendation, which never brought forth such a prince, whose imperial virtues contend with the excellency of her person: both virtues contend with her fortune, and both virtue and fortune contend with her fame.

“Orbis amor, famæ carmen, cœlique pupilla;
Tu decus omne tuis, tu decus ipsa tibi!”

END OF VOL. I.

BACON;
HIS WRITINGS
AND
HIS PHILOSOPHY.

BY GEO. L. CRAIK, M.A.

IN THREE VOLUMES.

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BACON ;

HIS WRITINGS, AND HIS PHILOSOPHY.

PART II.

BACON'S PHILOSOPHICAL WORKS.

INTRODUCTION.

ALL Bacon's philosophical writings may be reduced to the scheme of his *Instauratio Magna*—may be arranged as either parts or appendages of that work. The spacious plan of the *Instauratio*, as sketched by Bacon himself, comprehends alike those of them that were published before it was conceived or announced, and whatever he afterwards wrote.

In our examination or analysis, therefore, of these writings, we shall take them in the order in which they stand, or may most naturally be placed, in the *Instauratio*; but it will be convenient, for clearness of reference, that we also enumerate here the successive dates at which they were severally published.

The 'Fragment of the Colours of Good and Evil,' otherwise entitled 'Places of Persuasion and Dissuasion,' was published, with the first edition of the *Essays*, in 1597. This tract, as we shall find, has been incorporated by Bacon himself in the *De Augmentis Scientiarum*, or First Part of the *Instauratio*.

The 'Two Books of the Proficiency and Advancement of Learning,' were published in English in 1605. They were afterwards expanded by the author into the Nine Books of the Latin Treatise *De Augmentis Scientiarum*.

The Latin treatise 'De Sapientia Veterum' (Of the Wisdom of the Ancients), of which an account has already been given among the Moral Works, may also be numbered here, as being in part incorporated with the *De Incrementis Scientiarum*. It was published by itself in 1610.

The 'Novum Organum Scientiarum,' forming the Second Part of the *Instauratio*, was published in 1620. It was accompanied not only by its own preface, but also by a Preface and other Prolegomena to the entire *Instauratio*, including, in particular, what was entitled the *Distributio Operis*, or exposition of the Parts of which that great work was to consist. This was the first announcement of the *Instauratio Magna*.

In 1622 was published a portion of the Third Part of the *Instauratio*, under the title of 'Francisci Baconi de Verulamio, Vice-Comitis Sancti Albani, Historiæ Naturalis et Experimentalis ad Condendam Philosophiam, sive Phænomena Universi. Quæ est Institutio rationis Magnæ Pars Tertia.' It consisted of the 'Historia Ventorum' (History of the Winds), with an *Aditus*, or Preface, of five other similar histories.

This volume was followed in 1623 by the 'Historia Vitæ et Mortis' (History of Life and Death), and the other four of the Six Histories intended to compose the Third Part of the *Instauratio*.

In the same year, 1623, was published the entire First Part of the *Instauratio*, under the title of 'De Dignitate et Augmentis Scientiarum' (Of the Dignity and Advancement of the Sciences), in two Books, being a translation into Latin and expansion of the Two Books of the *Advancement of Learning*, forming the First Part of the *Instauratio*. This was the last portion of the *Instauratio* published by Bacon himself.

In 1627, after Bacon's death, his chaplain, Rawley, published the Ten Centuries of his 'Sylvarum, or Natural History,' in English, designed to form another portion of the Third Part of the *Instauratio*. It had been prepared for the press, and Rawley's Preface to it had been written, before the death of the author.

In 1653 Isaac Gruter published at Amsterdam

duodecimo volume of about 500 pages, a collection of what he called the Writings of Bacon in Natural and Universal Philosophy—‘Francisci Baconi de Verulamio Scripta in Naturali et Universali Philosophia’—all, as he states, new to the world, and copied from manuscripts carefully corrected by the author, and bequeathed by him to the care of the most noble William Boswell, that is, Sir William Boswell, minister or agent of James I. and Charles II. in Holland. And it is true that in his will Bacon, after directing his executors, and especially Sir John Constable, and his “very good friend, Mr. Bosvile,” to take care that of all his writings, meaning his printed works, both English and Latin, there may be books fair bound and placed in the king’s library, and in the libraries of the University of Cambridge, and of Trinity College, and of Bennett College, and of the University of Oxford, and of the Archbishop of Canterbury, and of Eton College, adds; “Also I desire my executors, especially my brother Constable, and also Mr. Bosvile, presently after my decease, to take into their hands all my papers whatsoever, which are either in cabinets, boxes, or presses, and them to seal up until they may at their leisure peruse them.” Nevertheless, most of the pieces printed by Gruter are, from whatever cause, extremely inaccurate; and some of them are evidently only the first drafts of what we have elsewhere in a more perfect form. Of several, however, we have no other original copies.*

In the First Part of the collection entitled ‘Resus-

* Three Letters from Gruter to Rawley are published by Tenison, with translations, in the *Baconiana*, pp. 221—241. In the first, dated from the Hague, 29th May, 1652, he says:—“I send you here a catalogue of those writings which I had in MS. out of the study of Sir William Boswel, and which I now have by me, either written by the Lord Bacon himself, or by some English amanuensis, but by him revised; as the same Sir William Boswel (who was pleased to admit me to a most intimate familiarity with him) did himself tell me.” “These,” Tenison notes, “were the papers which J. Gruter afterwards published under the title of *Scripta Philosophica*.”

INTRODUCTION.

citatio,' published by Rawley in 1657, one piece of which may be reckoned among Bacon's Philosophical Writings, his 'Letter and Discourse to Sir Henry Slough touching Helps for the Intellectual Powers.'

In 1658 Rawley published a collection of Bacon's Posthumous Works, under the title of 'Opuscula V. Posthuma, Philosophica, Civilia, et Theologica, Fidei et Eisei Baconis, &c., nunc primum edita;' which contains several philosophical treatises not previously printed; also more perfect copies of some of those edited by Gruter.

A tract in English entitled 'Articles of Enquiry touching Metals,' &c., appeared along with an edition of the 'Sylva Sylvarum' in 1662; the publisher, William Lee, who is the same by whom all the editions both of the *Sylva* and of the *Resuscitatio* had been brought out, stating at the end that he had received it some months before from Rawley corrected for the press. And perhaps a few other short discourses may have first got abroad at various times in similar pamphlets, which are now unknown or difficult to be procured. "If it be objected," says Rawley, in his Preface to the First Part of the *Resuscitatio*, "that some few of the pieces whereof the whole consisteth had visited the public light before, it is true that they had been obtruded to the world by unknown hands, but with such scars and blemishes upon their faces that they could pass but for a spurious and adulterine brood, and not for his lordship's legitimate issue; and the publishers and printers of them deserve to have an action of detamation brought against them by the State of Learning for disgracing and personating his Lordship's works."

Of Archbishop Tenison's collection, entitled 'Baconiana, or Certain Genuine Remains of Sir Francis Bacon, &c., now the first time faithfully published,' which appeared in 1679, one division consists of 'Philosophical Remains,' or 'Arguments appertaining to Natural Philosophy,' and another of 'Medical Remains.'

Finally, a few additions were made to this portion of Bacon's works by the publication, in 1734, of 'Lat

main body of the Lord Chancellor Bacon ; collected by Robert Stephens, Esq., late Historiographer Royal ; the title runs in the second edition, published in 1736, ' Original Letters, Memoirs, Parliamentary Affairs, State &c., with some curious pieces in Law and Philosophy ; published from the Originals of the Lord Chancellor Bacon.' This is commonly called Stephens's collection ; his first, published in 1702, being entitled ' Letters of Sir Francis Bacon, &c., now collected, with a Historical Introduction ;' or, in the second edition, published in 1736, ' Original Letters and Memoirs, by the Lord Chancellor Bacon during the reign of James I. . . . collected and published, with an Introduction, by Robert Stephens, Esq., late Historiographer Royal, to which is prefixed a large Historical Intro-

SECTION I.

PROLEGOMENA TO THE INSTAURATIO MAGNA.

THE ' *Novum Organum*,' or Second Part of the *Instauratio*, when first published in 1620, was accompanied, as has been stated above, by certain preliminary announcements, which, however, were evidently intended to be introductory to the entire *Instauratio Magna*. There are four in number, and are eminently deserving of attention before entering upon the perusal of the work which they precede and usher in.

First there presents itself a brief but solemn and stirring proclamation of the general design of the work, headed, ' *Franciscus de Verulamio sic cogitavit, talique apud se rationem instituit; quam viventibus et posteris notam fieri ipsorum interesse putavit*' (Francis of Verulam thus thought, and proceeded in considering things in his own mind after this manner; which he deemed that it concerned both his contemporaries and posterity that they should be made acquainted with). It commences thus, to adopt a translation slightly modified from the old one by Gilbert Wats, which, although disfigured by some affectation or pedantry, is both closer to the original and more expressive than that of Mr. Shaw.—' Seeing it was manifest to him that the human understanding creates itself much trouble, nor makes apt and sober use of such aids as are within the command of man; from whence infinite ignorance of things and from the ignorance of things innumerable disadvantages, his opinion was, that with all our industry we should endeavour, if haply that same common blessing can hardly be found upon earth, at least among earthly felicities) might by any means be con-

restored, or at least brought to terms of nearer correspondence." This, then, we are to keep in remembrance, is the great purpose of the author:—to restore, or rather to establish that "*commercium mentis et rerum*,"—that direct intercourse between the mind and things—by which alone he conceives we can ever rightly understand and turn to proper account the natural forces and capabilities by which we are surrounded.

He goes on to observe that he had no hope at all that the prevailing errors would rectify themselves, either by the inherent power of the understanding or by the aid of dialectic, or logic; because the primary notions which the mind was wont almost passively and supinely to drink in, and from which all others spring, were unsound, confused, and rashly abstracted from the realities to which they relate; while there was the like luxuriant variety and inconstancy in the second and sequent notions; so that it came to pass that the whole system of reasoning which men employed in the inquisition of nature was not well put together and built up, but was merely a showy pile without any sound foundation. For, whilst men admired and celebrated the imaginary powers of the mind, her true faculties, such as they might be made, if due aids were made use of by her, and she were to carry herself complyingly towards things instead of insulting over them, were passed over and allowed to lie unused.

"This one way, therefore," he concludes, "remaineth, that the whole business be attempted anew with better preparations, or defences against error; and that there be a universal *INSTAURATION*, or re-construction, of the arts and sciences, and of all human learning, upon a due basis." That is the meaning of the word *Instauratio*: it was used by the Romans for the repetition of anything; and generally with a special view to correctness or completeness of performance; as, for instance, of games or sacrifices of which the first performance had been unsatisfactory. It is properly a building up, and is nearly the same thing with a restoration.

(Of what remains of this preliminary intimation of the

Design of the *Instauratio* the following are the most remarkable passages. — "It does not escape him how untrodden and solitary is the way of this experiment, and how hard it may be for him to win belief in its practicability. Nevertheless, he thought that he ought not to desert either the undertaking or himself, but should at least make trial of entering upon the road which although it is a pervious and penetrable to the mind of man. . . . And being uncertain when these things might hereafter come into any other mind, led principally by this consideration that he had heard of no one hitherto who had applied himself to such cogitations, he determined to publish by themselves such portions of his design as he had been enabled first to finish. . . . Assuredly, he esteemed any other ambition whatsoever as inferior to what he had thus taken in hand; for this which is he created of either is nothing, or is so great that he may well be contented with the merit of that alone and seek for nought beyond it."

Then follows a Dedication to the King, James I. The address can in strictness be understood as referring only to the *Novum Organum*, which alone accompanied it when it first appeared, but it is sufficiently applicable also to the whole of the *Instauratio Magna*. What Bacon proposed as his new method, although recommended and illustrated in other parts of the *Instauratio*, is only formally propounded or explained in the *Novum Organum*. It is there that what he conceives to be the novelty of his general views or principles is chiefly to be found. In any circumstances, therefore, his preparatory observations on his main design would have had special reference to that part of the work.

What he offers, he tells his majesty, is at least altogether new, new in its very kind; yet copied, he adds, from a very ancient original, namely, from the works of nature itself and the nature of things and of the human mind. He has himself been accustomed to esteem the work the offspring rather of time than of wit; for the only thing wonderful in it is, that the first conception of it is *in this it contains*, and such strong suspicions respect-

opinions which have hitherto prevailed, should come by one's head after that, the rest followed naturally. Towards he expressly describes his work as a new kindled amid the darkness of philosophy to be a to all coming time, and as a regeneration and in- tion of the sciences. What he has put into men's , however, he remarks in conclusion, is the organ- trument, the materials on which it is to be em- ed must be sought from things themselves.

Next we have a Preface of considerable length, headed the State of the Sciences, that it is not prosperous greatly advanced; and that another way altogether what hath been heretofore known must be opened human understanding, and other helps obtained, der that the mind may be able to exercise its right the nature of things."

It seems to us," he begins, "that men neither pro- understand what acquisitions they have made, nor powers they are endowed with; the former they rate, the latter they underrate. And so it comes to that, either holding such arts as are generally in and practised in an immoderate estimation, they nothing more; or, undervaluing themselves beyond in equity they ought, they waste their powers upon of lighter significance, and refrain from making of them in such a way as might be really to the use." It is, as usual, impossible to abridge what is; the compactness of the statement sets any such apt at defiance, all that can be done is to extract a of the leading remarks, omitting the connexion, or ag the reader to make it out for himself. Here then the passages, not which are the most ingenious or ant, but which are most material for the under- ing of the author's design, and of his own conception hat he had accomplished in the work the principal on of which he now laid before the world. "As

the author's *instauratio* of existence, knowledge

to have the qualities of childhood, as being apt for talk, but impotent and immature for generating any thing; for it is of controversies rank and fertile, but of wisdom barren and fruitless. . . . If this sort of wisdom were altogether a lifeless thing, it is evident that that which has never have happened which now for many ages has continued; that the sciences thence resulting should stand still, in a manner immoveable in their first footings without any augmentation worthy of the human race; that such a degree, that not only assertion remains assertion, but even question remains question, and is not determined by disputation about it, but fixed and nourished; that all tradition and succession of discipline represent and exhibits the persons only of teacher and bearer, of inventor and of another adding something of new to what his predecessor has invented or discovered. In the mechanic arts we see the contrary thing to happen to them, as if they drank in some life-inspiring breeze, they increase, and are perfected; and, appearing for the first part rude and even burthensome and shapeless, in the hands of their first authors, in course of time acquire virtues and a certain adaptation or serviceableness, so that the wishes and desires of men sooner fail and change, than those arts arrive at their height and perfection. Philosophy, on the contrary, and the intellectual sciences, are, like statues, adored and celebrated, but are not carried forward, nay, commonly, they are of most vigour when first produced, and ever after go on degenerating. . . . Let no one affirm that the sciences, increasing in degrees, have at length come to a certain full stature, and have at last, as having finished the course allotted to them, fixed themselves in the works of some few authors, so that now nothing better can be found out, and it remains that what has been invented should be cultivated and adorned. It were to be wished, indeed, that it were the case. But the more correct and the truer account is, that this enslaved condition of the sciences is no other else than a thing bred from the audacity of a few, and the sloth and pusillanimity of the rest of mankind. As soon as any particular science has in parts been

reality has corrupted the labours of his predecessors. That he has done is wont to be well-pleasing to succeeding generations on account of the easy utility of his and their wearisomeness and impatience of renewed . And if any one be moved by the inveterate habit of opinions, as if it were the verdict of time, I know that he leans upon a very weak and false consideration. For we are in great part ignorant of what has been made known and published abroad in several arts and sciences at various times and places ; more of what individuals have attempted and more of what has been done in private. So that neither the births nor the deaths of time stand recorded in any patent and public register. Nor is general consent and its long continuance, to be held of so much importance. For, for various reasons may be the kinds of civil polity, there is one political state of the sciences, and that always has been, and always will be, democratic. And with the prevalence of the doctrines that most flourish are ever either contentious and pugnacious, or specious and vain ; such, to say, as either ensnare assent or win it by blarney. And so, without question, the greatest wits in our age have been overborne, and in a sort tyrannized over, whilst men of capacity and comprehension above vulgar, yet consulting their own reputation, have

languid and backward in growth; presenting a show of perfection in the whole, but ill filled up in the parts; popular in its predilections, but suspected by its authors themselves, and for that reason fortified and faced with sundry artifices. . . . Nobody has yet been found who has rested enough upon things themselves and upon experience. And some who have committed themselves to the waves of experience, and have become able mechanics, yet in their very experience practise a roving manner of inquisition, and do not war with it according to any certain rule. Nay, many have proposed to themselves certain petty tasks, thinking it a great thing if they can but work out some one invention, by a method less impotent than unscientific. No one rightly and successfully teaches the nature of any thing in the thing itself: but all, after a laborious varying of experiments instead of finding any thing in which they can acquiesce and rest, find only matter for further inquiry. And there is one thing in especial which is not to be omitted, namely that all the industry employed in experimenting has from the beginning caught with a too forward and intemperate eagerness at certain purposed effects; has sought, I say, for fruit-bearing instead of light-bearing experiments, and not imitated the divine method, which on the first day created light alone, and to that devoted one whole day, nor on that day produced any works formed of matter, but only descended to such works on the following days. . . . The received system of dialectic, although it may be applied with perfect propriety to civil matters, and in such arts as stand upon discourse and opinion, yet is a long way from reaching to the substance of nature; and, by catching at what it cannot manage, has done more to confirm and as it were to rivet error than to open the way to truth. . . . The edifice of the universe is, in its structure, to the human intellect, like a labyrinth, where from all sides there present themselves so many ambiguous pathways, and fallacious similitudes of things and their signs, and oblique and interwoven windings and knots of nature, and the journey over it is to be constantly made under

light of the senses, sometimes shining out, something itself, through the forests of experience and facts. Nay, even the guides, as has been said, who themselves, are themselves perplexed, and help to innumerable errors and of those who err. In a case like this we must despair of the human judgment acting of its natural force, or even of achieving any thing but by the utmost happiness of fortune. For the truth cannot be won either by any excellence of power, however great, or by chance experiments, however frequently repeated. Our steps must be guided by truth all the way onwards, even from the first objects of the senses, must be secured by a certain method. . . . The ancients, indeed, showed themselves wise in those things which depend upon genius and meditation. But, as in former ages, when men were guided used to direct their course only by the position of the stars, they were indeed able to coast the shores of the old continent, or to cross some of its inland seas; yet before the ocean could be reached, and the regions of the new world discovered, it was necessary that the use of the mariner's compass, as a more trusty and certain conductor, should become known, even so, those things which have been found out in the arts and sciences in such sort that they might have been arrived at by meditation, observation, and discussion, as compared with the senses, and lying almost immediately

sant among things, never withdraw our understanding for a longer space than is sufficient to allow images and beams of things (as happens in the sun to meet and concentrate;* whence it happens that much is left to more strength and excellence of wit. And in this manner we believe that we have established for ever a true and legitimate marriage between the poetic and rational faculties, whose sullen and incestuous divorce and separation has thrown all things into confusion in the family of mankind."

Even through the medium of a translation, and in otherwise imperfect form in which we have been obliged to present it, the extraordinary merit of this Preface to the *Instauratio Magna* as a piece of writing will be felt by every reader. In ingenuity and eloquence, in concision and pregnancy of style, in richness and beauty of illustration, and in easy strength of execution, it may be compared with anything else that we have of Bacon's. But notwithstanding the large proportion of truth which it unquestionably contains, is its philosophic soundness equal to its rhetorical brilliancy?

Bacon, we apprehend, in all his speculations upon

* That is, apparently, to meet and arrange themselves as a distinct representation in the understanding, in the manner as they do when conveying impressions to the senses. According to this interpretation the images and beams, or rays, both express nearly the same thing—the emanations figuratively supposed to proceed from objects by which they make themselves to be perceived by the senses and the mind. The original is—"Nos vero—intellectum longius a rebus non trahimus quam ut rerum imagines et radii (ut in sensibus coire possint)." Mr. Wood's translation in Mr. Montagu's edition is, "We abstract our understanding no further from [things] than is necessary to prevent the confusion of images of things with their radiation, a confusion similar that we experience by our senses." But this is plainly very opposite of what the Latin states. *Ut possint coire* never mean "to prevent the confusion." Even if the *imagines* and the *radii* are to be understood as different, the translation of the clause must be, that they may come together, not that they may not be mingled or confused.

here and elsewhere, confounds two things which are distinct in their nature—the method of invention, and the exposition or theory of the method—and attributes an efficiency to the latter which belongs only to the former. It is a common error. As Bacon's *Novum Organum* is conceived to have taught the art of discovery, so the old *Organon* is very generally supposed to have first taught the art of reasoning. But the incontrovertible fact is, that men reasoned just as well before the time of Aristotle as they have done since. What his *Organon* expounded was not the art but the science of reasoning; that is to say, it investigated what reasoning was, and reduced its formulæ to a system. It no more could teach the art of reasoning than his treatise on Poetical taught or could teach the art of writing, or than La Place's *Mécanique Céleste* can teach the art of constructing the heavens. The system of the heavens, the nature of poetical language and expression, the laws according to which the human mind operates, are all nearly alike removed from the class of things that can be inculcated by precept. They are not for scientific examination, not for being taught. Of the three cases, that of the writing of poetry, being the observance of certain forms which are in part traditional or conventional, and admit of being specified and reduced to rules, is the only one in which anything properly called an art is possible. Several Acts of Poetry have been written, but

one way. To take the common example, let a person believe or understand that all men are mortal, and that John is a man, and he cannot help performing the act of reasoning, which consists in inferring from these statements, called premisses, the conclusion that John is mortal. No art is required to teach him to do this, and no discipline to which his mind could be subjected could possibly prevent him from doing it. He is with power to do otherwise. And so it is in every other instance in which an act of reasoning is performed.

Do all minds, then, reason equally well? In a strict sense of the term *reason*, they do. Let any two minds equally well apprehend the propositions which form the premisses of a syllogism, and they will infallibly draw from them the same conclusion. The conclusion is in fact, nothing else than the new form which one of the premisses necessarily assumes as soon as it is viewed along with the other. It assumes this new form to the mind by a law of nature as irresistible as that by which a visible object changes its colour to the eye according to the colour of the light that is made to fall upon it, or the medium through which it is seen.

Logic does not undertake either to supply the power of comprehending the premisses of a syllogism where it is wanting, or to direct the mind in the selection of the premisses from which it is to draw its conclusions. It does not concern itself at all with the premisses—even with the question of their truth. All men are mortal. John is a man; therefore John is mortal, is as correct a syllogism, or as good logic, as the exact opposite, which is commonly given.

Yet in the soundness and judicious selection of the premisses lies all the practical value of any reasoning. The difference in knowledge and capacity between two minds will never be indicated by their disagreeing in the conclusion to be drawn from the same premisses when equally well understood by each; but it will be indicated by the one comprehending the premisses more readily or more correctly than the other, or by the one admitting the truth of premisses which the other does not.

or, most decisively of all, by the fortunate few and courses of inquiry which are adopted and which do not suggest themselves to the rest of all this logic takes no account.

But that logic can do is to make a single deduction. When the syllogism is completed, no further formed, its power is gone. In the common example noted above, when we have arrived at the conclusion that John is mortal, we cannot by any aid of logic take another step. Among all its formal devices that will help us over another such thing could not carry the speculation further, it must be done by an act, which is altogether out of the province of logic, the introduction of a new premiss. It is in the selection of that premiss that the real ability of the reasoner shows, and that all the value and success of the logic consists. As for the conclusions of the syllogisms, they are, in moral speculation at least, commonly not even set down, they are left for the student to deduce for himself, it is held to be sufficient if he is supplied with the premisses by which they are suggested, or rather in which they are in-

cluded. Only is the invention or selection of his premisses in which it thus appears that all the success of the logician or speculator depends, a thing that is not pretended to be taught by logic, it is manifestly not to be taught at all. It is no more to

without words—by propositions or by experiments, is the same mental power working with different instruments, or upon different materials. It is equally in one case as in the other a power evidently incommunicable by teaching, and which no exposition of its nature or manner of operation can ever convey to him who knows it not. It is not of the nature of a spade, or a musket, or an algebraic formula, or of any thing else which can be put into men's hands as an *organum*, or instrument.

Without questioning the truth of the doctrine preached by Bacon, that it is from the observation and examination of things that science must begin, we deny that the promulgation of this truth, however new it might have been as a proposition, was giving men any *novum organum*, or new instrument of discovery. The practice of the method which he asserts to be the only one in which discoveries can be made, and his assertion, demonstration if you will, to that effect, have no necessary connexion. Although the assertion had not been made before, the practice may have been going on from the beginning of the world. Indeed, the assertion itself implies the previous existence of the practice, unless it is to be held that no discoveries whatever had been made in the arts and sciences, except perhaps accident, until Bacon arose.

Exactly the same doctrine that Bacon has laid down for science and philosophy has also been announced, and in our own day generally accepted, as the true faith of poetry. Here too it has been proclaimed that nothing can be done without the study of the realities of nature, that nature is the supreme rule and standard—that "art itself is nature." After some generations in which poets had been more accustomed to look to certain great masters than to this greater mistress, they have been recalled, or rather they have returned, to their allegiance. For in every such case of the establishment of juster and higher views in any department of intellectual pursuit, the practice precedes the preaching. *Better faith* always shows itself in production before it takes the form of proposition. It was the poets

the critics here, not the critics who taught the

But what critic or theorist ever imagined that, in giving what we may call the new doctrine as a matter, he was putting into the hands of men any of the nature of a new organ or instrument? So that, the doctrine itself involved the very opposition or affirmation. If its account of the nature of intellectual production was correct, the practice of the same could be no novelty, whatever the formal state of it might be; for whatever true poetry had any been produced was a proof of the practice having followed. And neither in poetry nor in philosophy any theory of the method of invention, however correct or complete, communicate any thing of the faculty of invention. It might as reasonably have been expected that the announcement of the true theory of the circulation of the blood would work some great and general movement in the beating of people's pulses.

Accordingly, in point of fact, the exercise of the inventive faculty, either in poetry or in science, has never been affected by the prevalent state of opinion or the philosophy of method, or by the views in the departments of speculation which may have been maintained by the individual poet or scientific inventor. Poetry that is fullest of invention, fullest of reality of life, was produced before the birth of criticism, and never has been pretended that the invention of any of the greatest poets of any age has been quickened or quickened by the critical theories of their time. No one has dreamed of calling Aristotle the Father of Poetry because he wrote a treatise upon the Poetical, though, if no poetry of earlier date had been preserved, he would doubtless have been claimed for him, and might possibly have been assured that no poetry would have been produced down to the present hour if his treatise of his had not been written. Such a claim would have been more appropriate, than that which

independent investigation had for many centuries given way in every department of thought before the spirit of submission to authority and acquiescence in dogmatical creeds of old establishment. It was not more the case in science than in literature. Even for a considerable time after what is called the revival of letters in the fourteenth century, the imitation of the ancient models was the only thing attempted or dreamed of by the aspiring genius. The habit of thought was universal, every thing men looked only to the mighty and glorious past. And the immense superiority of that past might almost be said to justify them, it was little to be wondered at that the writers and philosophers of classical Greece and Rome should be looked back to as almost a race of superior beings by all the generations that succeeded them. Least of all was a thought of questioning their authority likely to occur to that generation to whom the sunlight of their genius first re-emerged in effulgence from the clouds that had obscured it for thousand years. But by the time that Bacon's great work appeared, in the early part of the seventeenth century, this all believing reverence for antiquity had long begun to pass away. The true spirit of scientific inquiry was fairly re-awakened, and discoveries which had already wrought a complete revolution in physical science had been made by Copernicus, by Tycho Brahe, by Kepler, by Galileo, by Bacon's own countryman Gilbert, and others. Bacon, indeed, does not appear to have been aware of this, he speaks with contempt repeatedly of the new views both of Gilbert and of Copernicus, the others we believe, he nowhere mentions. But that makes no difference. it is indisputable that the very thing which he is supposed to have been the first to teach, men were already busy doing in all directions. And of the numerous succession of inventors and discoverers who since appeared in every department of the field of science it is equally certain that very few, if any, have ever been distinguished as students of Bacon's writings, or reasonably be supposed to have even indirectly acquired much knowledge of the spirit or principles of his

his method. Where is the case in which it can fairly or even probably made out that any discovery has been arrived at through that method, followed more closely than it would necessarily have been in any particular instance although Bacon had never added it or had never lived? If the history of all great inventions and discoveries of the last two hundred years were to be traced, we doubt if the proportion of them that would be found to be fairly attributable to the inspiration of Bacon would turn out to be much more considerable than that of the great poems of the two thousand years that may be attributed to the tradition of Aristotle.

The Preface to the *Instauratio Magna* is followed by a short discourse entitled *Distributio Operis*, or The Distribution of the Work. It consists, or rather will be, as it is intimated, of Six Parts, entitled, the 1st, *Partitiones, or Divisions, of the Sciences*, the 2nd, *Novum Organum* (that is, The New Organ or Instrument), or Directions respecting the Interpretation of Nature; the 3rd, *Phænomena of the Universe*, or Natural and Experimental History for the building up of a Philosophy; the 4th, *The Scala Intellectus* (or Ladder for Understanding); the 5th, *Prodromi* (that is, Pre-views), or Anticipations of the Second Philosophy; the 6th, *The Second Philosophy*, or Active Science. We will translate so much as will suffice to explain what the author contemplated setting forth under each of these heads:—

The First Part exhibits the sum, or universal deduction, of that knowledge or doctrine in possession of the human race is up to this time, . . . And our inquiries include not only those things that have been put out and are known, but those also which have been so passed over and may be said to be owing. . . . It will be our constant care to subjoin either instructions for the supplying of such deficiencies, or even

for the purpose of taking the auspices, but to enter as military commanders with the design of doing service.* And this is the First Part of the work.

"Next, having been carried through the ancient we will prepare the human intellect for passing on. Accordingly what is assigned to the Second Part is doctrine respecting a better and more perfect employment of the reason in the investigation of things respecting the true helps of the understanding, in that thereby (in so far as the condition of humanity of mortality allows) the understanding may be extended and endowed with more ample powers for conquering the steep and obscurities of nature. And that art we adduce and which we are wont to call the interpretation of nature) is a kind of logic, although the difference between it and the common logic is very great may indeed be described as something passing over. For that vulgar logic also indeed professes to confer and furnish helps and guards for the understanding; in this alone they agree. But that which we bring forward plainly differs from the vulgar, principally in things, namely, in its end, the order of demonstration and the beginnings of the inquiry.

"For the end which this science of ours proposes to find out not arguments, but arts; and not what is accordant with principles, but principles themselves; not probable reasons, but designations, and indicative effects. And so from a different purpose follows a different result. For there an adversary is vanquished and constrained by disputation; here nature by operation.

* And with the diverse ends agree the nature and order of demonstration in the two. For in the vulgar almost the whole labour is spent about the Syllogism. Respecting Induction the dialecticians seem to

* The Latin is, "ut duces, promerendi causa." Mr. W. translates it—"like generals to invade them for conquest," hardly authorized by the original. It seems to be from upon that of Watts—"as captains to invade them for conquest." Shaw omits the passage.

never seriously thought, merely passing it over
 without mention as they hasten on to their formulas of
 conclusion. But we reject demonstration by syllogism,
 proceeding too confusedly and allowing nature to
 slip from our hands. For, although it cannot be
 denied by any one that those things which agree in the
 term, agree also with one another (which is a sort
 of mathematical certainty), nevertheless there is this of
 value in the method, that the syllogism consists of pro-
 positions, the propositions of words, and that words are
 tokens and signs of opinions.* We there-
 fore reject the syllogism, and that not only with regard
 to principles (to which the logicians themselves do not
 resort), but with regard also to middle propositions;
 indeed the syllogism in some way or other educts
 things forth, but they are such as are barren of
 fruit and remote from practice, and plainly unsuited to
 be part of the sciences. Although, therefore, we
 reject the syllogism, and to such celebrated and
 solid demonstrations, the jurisdiction over popular
 matters (those that depend upon mere opinion (for in that
 respect we stir nothing), yet for inquiring into the
 nature of things we use induction throughout, for the
 minor propositions as well as for the major. . . .

Therefore also the order of the demonstration is
 here inverted. For hitherto the matter has been
 managed in this wise, that from the intu-
 it of the senses and from particular objects light is
 carried once up to the widest generalizations, as if to
 centres around which disputation may revolve; and
 from other propositions are derived by means of
 terms.† . . . But, in our method, axioms are
 reached continuously and step by step, so that the most
 solid statements are only arrived at in the last stage;
 the most comprehensive generalizations, moreover,
 are not notional, but well defined, and such as

nature really acknowledges to be known to her, and enter into the very marrow of things.

"But by far the greatest work which we set in motion is in the form of the induction, and in the conclusion which is attained to by means of it. For that form which the dialecticians speak, which proceeds by enumeration, is a puerile thing, precarious in its conclusions, exposed to danger from any contrary instance, and occupying itself only with matters generally known, nor does it lead to any result. But science requires induction of such a form as may solve and separate experiments, and by means of due exclusions and rejection may bring out conclusions which shall be necessarily true. . . .

"Nor is even this all. For we carry down the foundations of the sciences to a greater depth, and connect them with greater solidity, and begin our investigation from a higher point, than has been hitherto done; rejecting to examination those things which the vulgar logic takes on trust. . . . We have resolved that logic should force even supposed first principles to give reasons for themselves, until they are clearly evident. And, in so far as respects the first notions of the understanding, there is no one of those things which, in our understanding, left to itself, has collected, but is held by us in suspicion. . . . Nay we sift in many ways the information of the senses themselves. . . . To obviate the risks thence arising, we have with much and faithful service sought and collected helps for the senses from all quarters, that substitutions may make up for their deficiencies and rectifications for their variations. Now we attempt that so much by instruments as by experiments. For the subtilty of experiments is far greater than that of the senses, assisted even by the most exquisite instruments; we speak of such experiments as are skilfully and artistically imagined and applied in accordance with the design of the inquiry.

"Such are the means which we prepare for the clearing and immission of the light of nature; and the might of themselves be sufficient if the human

ing were quite plain, and resembled a smoothed

But, seeing that the minds of men are so wonder-beset, that a clear and polished surface for receiving the rays of things is altogether wanting, a necessity that we should seek a remedy for this also.

The spectres by which the mind is pre-occupied are adscititious or innate. The adscititious have made way into the minds of men either from the assertions and sects of the philosophers, or from the perverse which have been laid down for demonstrations.

The innate are inherent in the nature of the understanding itself, which may be shown to be much more prone to error than the senses. . . . And the two former

of spectres may with difficulty be eradicated; the latter not at all. All that can be done is, to indicate

. . . . Wherefore this doctrine of the purifying of understanding, that it may be fitted for the reception of truth, is reduced to three reprehensions; the reprehension of philosophies, the reprehension of demonstrations, and the reprehension of the natural reason of

. . . . And this is the Second Part of the work.

But it is our intention not only to point out and pre-vent the ways, but also to enter upon them. The

Third Part of the work, therefore, comprehends the phenomena of the universe; that is, experience of every

thing, and such a natural history as may serve for a foundation on which to rear a system of philosophy. For no

number of demonstration, or form of interpreting nature, ever excellent for defending and sustaining the mind

from error and failure, can also provide and supply it with the material of knowledge. But by all who would

conjecture and divine, but discover and know, and who do not to invent buffooneries and fables about worlds,

but to inspect, and as it were to dissect, the nature of the real world, all knowledge must be sought from things

This, which is Mr. Wood's translation, appears to be the

themselves. Nor can any substitution or compensation of wit, or meditation, or augmentation, suffice in the stead of this labour, and inquisition, and perambulation of the world; not if all the wit of all men were to combine for the purpose. The labour, therefore, must be undergone, or the undertaking for ever abandoned. . . . It would be of no use to smooth the mirror if there were nothing in it to reflect. . . . But our natural history also, like logic, differs in many respects from that which is generally received; in its end or office, in its very structure and compaction, in its nicety, finally, in its selection and the order in which it is arranged in reference to what follows it.

“For, in the first place, we propose such a natural history as may not so much amuse by variety of matter, as even profit by present fruit of experiments, as shed light upon the discovery of causes, and yield the first milk of the nursing of philosophy. . . .

“And as for the compilation, our history will be only that of nature in a state of freedom and ease, when that is to say, she flows on and performs her work spontaneously—such as is a history of the celestial bodies, meteors, of the earth and sea, of minerals, plants, and animals, but much rather of nature constrained and vexed, that is, when she is thrust down from her prerogative, and pressed upon and made to take a new form, the art and ministry of man. . . .

“Nor do we present the history only of bodies, but have besides thought it right to exert our diligence to prepare separately also a history of properties themselves of those, we mean, which may be deemed to be as it were cardinal in nature, and in which the first elements of nature plainly reside, as being matter in its first passions and desires, namely, density, rarity, heat, cold, consistency, fluidity, gravity, levity, and many more. . . .

“After having thus guarded the understanding with the surest helps and protections, and prepared with more severe selection a complete host of divine works, it may seem that nothing more remains but that we proceed at once to philosophy itself. Yet in a matter so arduous

and doubtful it appears requisite that some things should be interposed;* partly for the purpose of instruction, partly for present use. Of these the first is, that some examples be offered of investigation and discovery according to our system and method. . . . We speak now of such examples only as may be of the nature of types and models, placing as it were before our eyes the whole process of the mind, and the continuous frame and order of discovery in particular subjects, and they various and of note. . . . To examples of this kind, therefore, we devote the Fourth Part of our work; which in fact is nothing else than a particular and expanded application of the Second Part.

"The Fifth Part is introduced only for a temporary purpose, until what remains can be finished. . . . It is made up of whatsoever things we have ourselves either found out, or proved, or added; and that not exclusively by the proper methods and rules of interpretation, but simply by that same exercise of the understanding which other men are accustomed to use in investigation and discovery.

"Finally, the Sixth Part of our work, to which all the other parts are subservient and ministerial, at length discloses and propounds that philosophy which is educed and constituted out of that legitimate, chaste, and severe inquisition, which we have previously taught and prepared. But to accomplish and bring to a termination this last part is a thing both beyond our strength and beyond our hopes. We hope indeed to furnish no contemptible beginning of it; the fortune of the human race will supply the end; which will be such perhaps as, in the present state of things and of men's minds, the imagination cannot easily comprehend or take measure of."

The panoramic view of his vast design which Bacon spreads out before us in this preliminary discourse, is for

* The meaning is not, as Mr. Wood gives it, "a few reflections must necessarily be here inserted." The "*quaedam interponenda*" are the subjects of the Fourth Part of the work, the *Scala Intellectus*.

the greater part as luminous and distinct as it is and magnificent. It will convey a complete view to whoever will study it attentively of the general plan and object at least of the three first parts of the *ratio Magna*; the latter portion of the work, the actual composition of which the author cannot have ever properly entered, seems to have floated somewhat vaguely before his own eye, and it may form a distant back-ground in the picture he has sketched. In our abstract, we have omitted the mere eloquence and illustration, with many penetrating, and most felicitously expressed, but we have preserved all the substance of the argument.

Bacon's adoption of the designation of a *methodus dialectica*, for his proposed method of inquiry, and his comparison of the method with the *ars* or common logic, are sufficiently accounted for by the use that had come to be made of logical forms in the discussion of scientific questions. It is true that the syllogism is the universal form of reasoning, and that demonstration when fully developed and expressed fall into one or other of the varieties of that form; but the defect of the scientific reasoning of the schoolmen, therefore, did not consist in its addictedness to syllogistic forms. The most perfect reasoning in the world, as in Euclid's *Elements of Geometry*, is every where syllogistic. The error of the philosophy, both natural and moral, which formerly prevailed, and against which Bacon directs his attacks, lay in the employment of syllogism for a purpose for which it was wholly incompetent, which was altogether beside its function of its province. A syllogism can establish a truth, but it cannot make out a truth. Its conclusion may be absolutely true, but that the syllogism makes out, or professes to establish, that it is true provided the premisses are true, is only a conditional affirmation. It is a truism that, given certain things, a certain other thing will follow. And one of the advantages which the *methodus mathematica* of geometry has is, that their premisses are all

positions, mere conceptions which the mind forms without having to look beyond itself. We are not denying that the conceptions or suppositions are true. They have in fact the peculiar character of being such that it is impossible for the mind not to believe them to be true. But, for that matter, the Arabian Nights' Entertainments might be delivered in a series of syllogisms. Given, it might be said, so many genies, giants, and enchanters, and such and such effects will follow. The one proposition would be as true as the other; the conclusion would be true if the premisses were true; and that is all that logic can make out in any case. The old writers on science were wont to employ it as if they thought it could do a great deal more. Its proper and only function is the exposition of an argument; they seemed often to think that a correctly constructed syllogism was the sufficient explanation of a phenomenon.

At the same time Bacon is not justified in making this matter of charge against the common logic. There is usually no fault to be found with the mere logic of the old scientific writers. Their conclusions are legitimately deduced from their premisses; and that is all that can be required on the score of logic. The single respect in which their demonstrations are objectionable is, that they often set out from false or insufficiently established premisses; but with the establishment of premisses, as such, logic has nothing to do; its sole office is the deduction of conclusions. Its premisses are assigned to it, or may be assumed at pleasure.

It is true that a false proposition which is adopted as one of the premisses of a syllogism has often been previously obtained as the conclusion of another syllogism. But, although false as a premiss, it may have been true as a conclusion; that is to say, it may have been quite legitimately deduced from other premisses. In that case the fault of the demonstration will still be, as before, that some one or other of the premisses has been false.

The greatest amount of misconception and confusion of thought, however, in regard to these subjects, has been occasioned by Bacon's describing the method he propose

for the investigation of natural phenomena as a new logic, and designating it by the term *Logic*. It has become common to distinguish it as the *Logic*.

Whatever else may be new in the Baconian logic, there most certainly neither is, nor can be, in its logic. If there were, it would only be that is, an unreasonable or absurd method. It has ever pretended that the old logic is false; the charge that has been brought against it is that it is inefficient. To talk of a new logic, different principles from the old, is tantamount to talking of a new geometry, or a new species of square or circle.

But what Bacon understands by Inductive logic at all, or anything of the nature of a logic, is the name given by the logicians to the syllogism in which a universal conclusion is derived from premisses relating to particulars, instead of a particular conclusion being derived from a universal, as is more commonly the case. But the conclusion of particulars in such an induction is complete, therefore, is as necessary as in the syllogism. Thus, John, Thomas, and Henry are dark-haired; John, Thomas, and Henry are of the family of the Smiths; therefore the Smiths are dark-haired; is an example of logical induction. Induction is altogether different. In that, from a number of particular instances, examined by means of observation and experiment, and sifted by the proper rejection of false conclusions, we infer, not by the necessary laws of logic (with which alone logic concerns itself), but on the ground of the uniformity of the operations of nature, that a certain thing is probably universally true. It is such a process as comes within the domain of logic, as already explained, undertakes to teach not how to generate a third, and in so teaching is entirely different from the generating propositions being true. A logical induction does not, any more than a logical

us, look beyond the mind itself: logic is the science of a certain mental process, not the science or art of the collection and examination of material facts. Its conclusions are, in all cases, necessary and irresistible, the premisses being admitted; and depend for their reception by the mind in degree upon its knowledge or experience of any kind, even upon the degree of its judgment, or capacity of weighing evidence. There is no evidence to be weighed or balanced in a syllogism, whether deductive or inductive: all the evidence is upon one side.

It is true that so much of the Baconian Induction as consists in drawing the conclusion may be resolved into a logical form, by introducing, or assuming that there is always present to the mind, as one of the premisses, a proposition asserting the uniformity of the operations of nature. In this way the major proposition will be, That is found in examined instances will be found in all instances; the minor, A certain thing is what is found in examined instances; the conclusion, Therefore the same thing will be found in all instances. The middle term, that by which the two premisses are connected so long as they continue distinct, and which like a bridge becomes unnecessary, and is removed, when they are in the conclusion brought together into one affirmation) will be, That is found in examined instances. But this only shows that, in so far as the Baconian Induction is a logical process, its logic is merely the common logic. If the term is used by Bacon, however, it includes also, and that, we may say, as its principal part, another process, the collection and examination of the instances, which, we have seen, is not a logical process at all.

SECTION II.

THE TREATISE DE DIGNITATE ET AUGMENTIS SCIENTIARUM; FORMING THE FIRST PART OF THE INSTAURATIO MAGNA.

WHEN the treatise *De Augmentis Scientiarum* was published, by itself, in 1623, it was introduced by a short advertisement from Dr. Rawley, Bacon's chaplain, the more essential portion of which is to the following effect:—"Since it hath pleased my lord to do me the honour of making use of my assistance in setting forth his works, I have thought that it would not be improper for me briefly to inform the reader of some things which concern this First Volume. The present treatise, on the Dignity and Advancement of the Sciences, was published by his lordship eighteen years ago, in the English language, and in two Books only; and was addressed to his majesty, as it still is. Not long afterwards he became anxious to have it translated into Latin; having heard that that was desired in foreign countries, and being, moreover, himself wont often to say that books written in the modern tongues would ere long become bankrupt. He now, accordingly, publishes such a translation, executed by persons distinguished for their eloquence, and revised and corrected, besides, by himself. The First Book is merely a translation, and is very little changed; but the remaining eight, which declare the partitions of learning, and formerly made only one Book, come forth now as a new work. The principal reason which moved his lordship thus to rewrite and amplify the work was this: that, in publishing long afterwards his *Instauratio Magna*, he appointed the *Partitions of the Sciences* to be the first part of that work, and to be followed first by the *Novum Organum*, then by the *Historia Naturalis*, and so forth. Finding, then, the

relating to the Partitions of the Sciences already treated (though less solidly than the dignity of the present demanded), he thought the best thing he could do would be to go over again what he had written, and bring it to the state of a satisfactory and completed

And in this way he considers that he fulfils the promise which he has given respecting the First Part : *Instauratio*." It had been noted at the end of *Distributio*, published with the *Novum Organum*, that the First Part of the *Instauratio*, comprehending partitions of the Sciences, was wanting ; but that the Partitions might in part be gathered from the Second Book of 'The Proficiency and Advancement of Learning, Divine and Human.'

His Life of Bacon prefixed in English to the *Resuscitatio* (1657), and in Latin to the *Opuscula Postuma* (1658), Rawley speaks of the translation of the 'Advancement of Learning' into Latin somewhat differently from what he does in this advertisement. In the English Life, in enumerating in their order the books and writings, both in English and Latin," writes Bacon after his retirement, he merely mentions *De Augmentis Scientiarum*, or *The Advancement of Learning*, put into Latin, with several enrichments and enlargements," as if the translation had been wholly his own. In the Latin Life he expresses himself emphatically : in there noticing the *De Augmentis* he describes it as a work which the author bestowed much labour in turning from English into Latin by his exertions, or as the phrase might almost be rendered, without assistance ;—"in quo e lingua vernacula, proprio Marte, in Latinam transferendo honoratissimum et plurimum desudavit." We must probably, however, understand the meaning of the worthy chaplain only that the translation was in part done by himself ; and his words, in truth, strictly taken, do assert more. In the *Resuscitatio* Rawley has printed among other Letters of Bacon's one entitled 'A Letter in request to Doctor Playfer to translate the book of *Advancement of Learning* into Latin.' There Bacon,

after some explanation of his design in writing the *Advancement* in which, he says, he had only taken up him "to ring a bell to call other wits together, which is the meanest office,"—adds, "It cannot but be consonant to my desire to have that bell heard as far as can be. And therefore, the privateness of the language considered wherein it is written, excluding so many readers; as the other side, the obscurity of the argument, in many parts of it, excludeth many others; I must account it a second birth of that work if it may be translated into Latin, without manifest loss of the sense and matter. For this purpose I could not represent to myself a man into whose hands I do desire more earnestly that work should fall than yourself; for, by that I have heard and read, I know no man a greater master in commanding words to serve matter. Nevertheless I am not ignorant of the worth of your labours; whether such as your place and profession imposeth, or such as your own virtue may, upon your voluntary election, take in hand. But I can lay before you no other persuasions than either the work itself may affect you with, or the honour of his majesty, to whom it is dedicated, or your own particular inclination to myself; who, as I never took so much comfort in any labour of mine own, so I shall never know myself more obliged in anything to the labour of another than in that which shall assist which your labour, if I can by my place, professional means, friends, travail, work, deed, requite unto you shall esteem myself so straitly bound thereunto as shall be ever most ready to take and seek occasion of thankfulness." Doctor Thomas Playter, or Playfe who was Margaret Professor of Divinity in the University of Cambridge, died in the beginning of the year 1608; so that the letter must have been written before then. Tenison relates, in the *Introduction to the Baconiana* (1679), that the translation was undertaken and actually begun by Playfer. "The Doctor," he says, "was willing to serve so excellent a person, and so worthy a design; and within a while sent him a specimen of a Latin translation. But men generally come at

of themselves when they strive to outdo themselves. They put a force upon their natural genius, and by straining of it crack and disable it. And so, it seems it happened to that worthy and elegant man. Upon this great occasion he would be over-accurate; and he sent a specimen of such superfine Latinity, that the Lord Bacon did not encourage him to labour further in that work, in the penning of which he desired not so much neat and polite as clear, masculine, and apt expression." At this time, probably, Bacon contemplated nothing more than a correct translation of the English work, without additions. When he long afterwards determined to extend it so as that it might serve for the First Part of the *Instauratio*, "he caused that part of it," Tenison tells us, "which he had written in English to be translated into the Latin tongue by Mr. Herbert [that is, George Herbert the poet], and some others who were esteemed masters in the Roman eloquence. If we are to understand this in what seems to be the natural and proper sense of the words, it would appear to have been only so much of the *De Augmentis* as had been already published under the title of the *Advancement of Learning* that was rendered into Latin by Herbert and his fellow-labourers; what was added, we are left to suppose, Bacon wrote in Latin, while, in the rest also, "he so suited the style to his conceptions, by strict castigation of the whole work," as Tenison adds "that it may deservedly seem his own." We may add what Bacon has himself said in his letter to Bishop Andrews, prefixed to his 'Advertisement touching an Holy War,' and written in 1623: "For that my book of *Advancement of Learning* may be some preparative or key for the better opening of the *Instauratio*; because it exhibits a mixture of new conceits and old, whereas the *Instauratio* gives the new unmixed, otherwise than with some little aspersion of the old for taste's sake; we have thought good to procure a translation of that book into the general language, not without great and ample additions and enrichment thereof, especially in the Second Book, which handles the Partition of Sciences; in s

port as I hold it may serve in lieu of the First Part of the *Instauration*, and acquit my promise in that part.

A few additional facts proper to be mentioned here may be gleaned from various letters of Bacon's, in which mention is made of the *Advancement of Learning* or the *De Augmentis*. In a letter to his friend, Sir Thomas Matthew, sent with a copy of the former on its first publication in 1605, we find him writing:—"I have now last taught that child to go, at the swaddling whereof you were. My work touching the Proficiency and Advancement of Learning, I have put into two Books; whereof the former, which you saw, I can't but account as a preface to the latter. I have now published them both: whereof I thought it a small adventure to send you a copy, who have more right to it than any man, except Bishop Andrews, who was my inquisitor." From this it would appear that the First Book of the *Advancement* had been completed probably some years before the second was added. In the letter accompanying the copy of the *De Augmentis* sent to the King Bacon writes:—"This book was the first thing that ever I presented to your majesty; and, it may be, will be the last. For I had thought it should have been *posthumu proles*. But God hath otherwise disposed for a while. It is a translation but almost enlarged to a new work. I had good help for the language. I have been also mine own *index purgatorius*, that it may be read in all places. For since my end of putting it into Latin was to have it read everywhere, it had been an absurd contradiction to forbid it in the language, and to pen it up in the matter." To the Prince he writes;—"I send your highness, in humbleness, my book of *Advancement of Learning* translated into Latin, but so enlarged as it may go for a new work. It is a book, I think, will live, and be a citizen of the world as English books are not."

The *De Augmentis* was not reprinted in the lifetime of the author; and the first edition is now an extremely rare book. The copy which Bacon presented to King James is still preserved in the British Museum. The subsequent editions Tenison complains of as having been

less correct. The work was early translated into French through the means of the Marquis Fiat, ambassador from the King of France at the English court; but in the translation "there are," according to Tension, "many things wholly omitted, many things perfectly mistaken and some things (especially such as relate to religion) wilfully perverted." There is also a modern French translation, filling the first three volumes of the '*Oeuvres de François Bacon, traduites par Lasalle, avec des notes Critiques, Historiques, et Littéraires,*' 6 tomes, 8vo.; Dijon, 1800. It has been reprinted, but without the notes, in a volume of the '*Pantheon Littéraire,*' entitled '*Oeuvres Philosophiques, Morales, et Politiques, de François Bacon, avec une notice biographique par J. A. Buchon,*' 8vo.; Paris, 1836. There are two English translations. One, by Gilbert Wats, was printed in folio at Oxford in 1640, and again at London in 1674. The other makes part of '*The Philosophical Works of Francis Bacon, by Peter Shaw, M.D.,*' first printed at London in 3 vols. 4to., in 1733; again, in the same form, 1737; and a third time in 12 vols. 8vo., in 1807.

Mr. Hallam has stated, in his '*Introduction to the History of the Literature of Europe,*' that more than two-thirds of the *De Augmentis* are a version, with slight interpolation or omission, from the *Advancement of Learning*, and that consequently less than one third of the former treatise consists of new matter. This we apprehend, an under statement of the extent of the additions. The First Book of the *De Augmentis* is nearly a translation of the *Advancement*; something is omitted but hardly any thing added. The Second Book of the *Advancement*, however, which is nearly three times as long as the first, is more than doubled in the remaining eight Books of the *De Augmentis*. The new matter therefore, instead of making less than a third, makes more than three-sevenths, or not much less than half of the whole work, while it makes more than the half of the portion of the work to which the additions are chiefly confined.

The Advancement of Learning sets out with

following panegyric address to King James, retained, with very slight abridgment, in the *mentis* :—

There were, under the law, excellent king, both duties, and freewill offerings; the one proceeding upon observance, the other upon a devout cheerfulness in duty there belongeth to kings from their servants both duty and presents of affection. In the former of these shall not live to be wanting, according to my most duty, and the good pleasure of your majesty's employment for the latter, I thought it more respective to make some oblation, which might rather refer to the private excellence of your individual person, than to the public your crown and state.

Wherefore, representing your majesty many times in mind, and beholding you not with the inquisitive curiosity, to discover that which the Scripture saith is inscrutable, but with the observant eye of duty and affection; leaving aside the other parts of your virtue and have been touched, yea, and possessed with an extreme at those your virtues and faculties, which the philosophy intellectual, the largeness of your capacity, the faith of your memory, the swiftness of your apprehension, the perfection of your judgment, and the facility and order of execution: and I have often thought, that of all the persons that I have known, your majesty were the best instance of a man of Plato's opinion, that all knowledge is but a recollection, and that the mind of man by nature knoweth all things, and hath but her own native and original notions (from the strangeness and darkness of this tabernacle of the flesh sequestered) again revived and restored: such a light I have observed in your majesty, and such a ready flame and blaze from the least occasion presented, or spark of another's knowledge delivered. And as the saith of the wisest king, "That his heart was as the sea;" which though it be one of the largest bodies, consisteth of the smallest and finest portions; so hath your majesty a composition of understanding admirable to compass and comprehend the greatest matters, vertheless to touch and apprehend the least; whereas it seem an impossibility in nature, for the same instrument to make itself fit for great and small works. And for the *of speech*, I call to mind what Cornelius Tacitus saith

Caesar: "Augusto profuens, et quæ principem deceret, entia fuit."* For, if we note it well, speech that is ut- with labour and difficulty, or speech that savoureth of fection of art and precepts, or speech that is framed the imitation of some pattern of eloquence, though never xellent, all this has somewhat servile, and holding of the t. But your majesty's manner of speech is indeed prince- lowing as from a fountain, and yet streaming and branch- tself into nature's order, full of facility and felicity, ting none, and inimitable by any. And as in your civil there appeareth to be an emulation and contention of majesty's virtue with your fortune; a virtuous disposition a fortunate regiment; a virtuous expectation, when time of your greater fortune, with a prosperous possession of in the due time; a virtuous observation of the laws of age, with most blessed and happy fruit of marriage; a vir- and most Christian desire of peace, with a fortunate, incli- in your neighbour princes thereunto: so likewise, in these actual matters, there seemeth to be no less contention be- the excellency of your majesty's gifts of nature, and the reality and perfection of your learning. For I am well ed that this which I shall say is no amplification at all, positive and measured truth; which is that there hath een since Christ's time any king or temporal monarch, has been so learned in all literature and erudition, di- and human. For let a man seriously and diligently ve and peruse the succession of the emperors of Rome; of h Cæsar the dictator, who lived some years before Christ, Marcus Antonius, were the best learned; and so descend to mperors of Græcia, or of the West; and then to the lines ance, Spain, England, Scotland, and the rest, and he find this judgment is truly made. For it seemeth much ing, if by the compendious extractions of other men's wits abours, he can take hold of any superficial ornaments and of learning; or if he countenance and prefer learning and ed men: but to drink indeed of the true fountains of learn- ay, to have such a fountain of learning in himself, in a king, in a king born, is almost a miracle. And the more, be-

ugustus had a fluent delivery, such as becomes a prince. translations at the foot of the page of Latin passages and es in the *Advancement of Learning* are for the most part me with those of Dr. W. C. Taylor's edition of that work, Lond., 1840.)

cause there is met in your majesty a rare conjunction of divine and sacred literature, as of profane and lay; your majesty standeth invested of that triplicity, which veneration was ascribed to the ancient Hermes; the fortune of a king, the knowledge and illumination of a philosopher, and the learning and universality of a philosopher; a property, inherent and individual attribute in your person, which serveth to be expressed not only in the same and modern times, but in the present time nor in the history or tradition of the past, but also in some solid work, fixed memorial, bearing a character or signature of the power of a king, and the difference and perfection of a king.

Therefore I did conclude with myself, that I could offer unto your majesty a better oblation than of some treatise to that end, whereof the sum will consist of these two former, concerning the excellency of learning and of the excellency of the merit and true glory of the promotion and propagation thereof: the latter, whereof the particular acts and works are, which have been employed and undertaken for the advancement of learning; and the defects and undervalues I find in such particular endeavours, that though I cannot positively or affirmatively present your majesty or propound unto you framed particulars, may excite your princely cogitations to visit the enclosure of your own mind, and thence to extract particular purpose, agreeable to your magnanimity and wisdom.

First, in vindicating the excellence of learning, I will clear the way, and, as it were, to make silence, that the true testimonies concerning its dignity may be the better heard, "without the interruption of objections." the author thinks "good to deliver the discredit and disgraces which it hath received from ignorance, but ignorance severally disguised, sometimes in the zeal and jealousy of divines, sometimes in the severity and arrogancy of politicians, sometimes in the errors and imperfections of men themselves." Bacon is never more impressive and more eloquent than in handling a theological subject, and we will quote, as a specimen of the presentment, his answer to the objections of the divines. *He observes*, are wont to say that the aspiring

Judge was the original temptation and cause of the fall ; and, among other disparagements, that many learned men have been arch-heretics ; that learned times have been inclined to atheism ; and that the contemplation of second causes, which is philosophy, withdraws the mind from dependence upon God, the first cause, which is religion. Partly from his early reading and the natural bent of his genius, partly in accommodation to the spirit of his age, which required that every subject should be viewed with some reference to theology, Bacon has introduced his theological notions into almost all his writings. He is fond, also, of repeating his new and peculiar thoughts of all kinds, and several of those which repeatedly occur elsewhere figure in the following passage :—

To discover then the ignorance and error of this opinion, and the misunderstanding in the grounds thereof, it may well appear these men do not observe or consider, that it was not the pure knowledge of nature and universality, a knowledge by the light whereof man did give names unto other creatures in Paradise, as they were brought before him, according unto their proprieties, which gave the occasion to the fall ; but it was the proud knowledge of good and evil, with an intent in man to give law unto himself, and to depend no more upon God's commandments, which was the form of the temptation. Neither is it any quantity of knowledge, how great soever, that can make the mind of man to swell ; for nothing can fill, much less extend the soul of man, but God and the contemplation of God ; and therefore Solomon, speaking of the two principal senses of inquisition, the eye and the ear, affirmeth that the eye is never satisfied with seeing nor the ear with hearing ; and if there be no fulness, then is "the continent greater than the content :"^{*} so of knowledge itself, and the mind of man, whereto the senses are but reporters, he defineth likewise in these words, placed after that calendar or ephemerides, which he maketh of the diversities of times and seasons for all actions and purposes ; and concludeth thus : "God hath made all things beautiful, or decent, in the true return of their seasons : also he hath placed the world in man's heart, yet cannot man find out the work which God worketh from the beginning to the end :"^{*} declaring,

* *The thing containing greater than the thing contained.*

not obscurely, that God hath framed the mind of man as a mirror or glass, capable of the image of the universal world, and joyful to receive the impression thereof, as the eye joyeth to receive light; and not only delighted in beholding the variety of things and vicissitude of times, but raised also to find out and discern the ordinances and decrees, which throughout those changes are infallibly observed. And although he do insinuate that the supreme or summary law of nature, which he calleth "The work which God worketh from the beginning to the end," is not possible to be found out by man; yet he doth not derogate from the capacity of the mind, but may be referred to the impediments, as of shortness of life, all conjunction of labours, all tradition of knowledge over from father to son, and many other inconveniences, whereunto the condition of man is subject. For that nothing parcel of the world is denied to man's inquiry and invention, he doth in another place make rule over, when he saith, "The spirit of man is as the lamp of God, wherewith he searcheth the inwardness of all secrets." When such be the capacity and receipt of the mind of man, it manifesteth that there is no danger at all in the proportion of quantity of knowledge, how large soever, lest it should make itself swell or out-compass itself, no, but it is merely the quality of knowledge, which, be it in quantity more or less, if it be taken without the true corrective thereof, hath in it some nature of venom or malignity, and some effects of that venom, which is ventosity or swelling. This corrective spice, the mixture whereof maketh knowledge so sovereign, is charity, which the apostle immediately addeth to the former clause: for so he saith, "Knowledge boweth up, but charity buildeth up;" not unlike unto that which he delivereth in another place: "If I speak with men, or with the tongues of men and angels, and have not charity, it were but as a tinkling cymbal;" not but that it is an excellent thing to speak with the tongues of men and angels, not because, if it be severed from charity, and not referred to the good of men and mankind, it hath rather a sounding and unworthy glory than a meriting and substantial virtue. And for that censure of Solomon, concerning the excess of writing and reading books, and the anxiety of spirit which redoundeth from knowledge, and that admonition of St. Paul, "That we be not seduced by vain philosophy," let those places be rightly understood, and they do indeed excellently set forth the bounds and limitations, whereby human knowledge is confined and circumscribed, and yet without any such contracting or limitation, but that it may comprehend all the universal nature

ings. For these limitations are three. The first, that we do place our felicity in knowledge as we forget our morals; the second, that we make application of our knowledge, we ourselves repose and contentment, and not distaste or inquiry; the third, that we do not presume by the contempt of nature to attain to the mysteries of God. For as touching the first of these, Solomon doth excellently expound himself in another place of the same book, where he saith, "I tell that knowledge recedeth as far from ignorance as light from darkness; and that the wise man's eyes keep watch upon his head, whereas the fool roundeth about in darkness: but all I learned, that the same mortality involveth them both." For the second, certain it is, there is no vexation or anxiety of mind which resulteth from knowledge, otherwise than only by accident; for all knowledge and wonder (which is the seed of knowledge) is an impression of pleasure in itself; when men fall to framing conclusions out of their knowledge, applying it to their particular, and ministering to themselves thereby weak fears or vast desires, there groweth that fulness and trouble of mind which is spoken of; for then knowledge is no more "Lumen siccum," whereof Heraclitus profound said, "Lumen siccum optima anima;"* but it cometh "Lumen madidum, or maceratum,"† being steeped infused in the humours of the affections. And as for the third point, it deserveth to be a little stood upon, and not to be lightly passed over: for if any man shall think by view and inquiry into these sensible and material things to attain that whereby he may reveal unto himself the nature or will of God, then indeed is he spoiled by vain philosophy; for the contemplation of God's creatures and works produceth (having regard to the works and creatures themselves) knowledge, but having regard to God, no perfect knowledge, but wonder, which is a broken knowledge. And therefore it was most truly said by one of Plato's school, "That the sense of man receiveth a resemblance with the sun, which, as we see, openeth and revealeth all the terrestrial globe; but then again it oblieth and concealeth the stars and celestial globe: so doth the sense discover natural things, but it darkeneth and shutteth out the divine." And hence it is true, that it hath proceeded that many great learned men have been heretical, whilst they have

Dry light (or intelligence) is the best animating principle.
 † Moistened or steeped light.

sought to fly up to the secrets of the Deity by the wings of the senses. And as for the conceit that too knowledge should incline a man to atheism, and that the rance of second causes should make a more devout dependence upon God, who is the first cause; first, it is good to ask the question which Job asked of his friends - "Will you leave God, as one man will do for another, to gratify himself?" certain it is that God worketh nothing in nature but by second causes; and if they would have it otherwise believed, it were imposture, as it were in favour towards God, and not else but to offer to the Author of truth the unclean sacrifice of a lie. But farther, it is an assured truth, and a conclusive experience, that a little or superficial knowledge of philosophy may incline the mind of man to atheism, but a farther prosecuting therein doth bring the mind back again to religion: for the entrance of philosophy, when the second causes, which next unto the senses, do offer themselves to the mind of man, it dwell and stay there it may induce some oblivion of the highest cause; but when a man passeth on farther, and perceives the dependence of causes, and the works of Providence, according to the allegory of the poets, he will easily believe the highest link of nature's chain must needs be tied to the throne of Jupiter's chair. To conclude, therefore, let no man, under the weak conceit of sobriety, or an ill-applied moderation, think to maintain, that a man can search too far, or be too well stored in the book of God's word, or in the book of God's works, of divinity, or philosophy, but rather let men endeavour an end of progress or proficience in both; only let men beware that they apply both to charity, and not to swelling; to use, and not to ostentation, and again, that they do not unwisely mingle and confound these learnings together.

We will add a portion of what he says on the head of the discredit that learning has received from learned men themselves:

Martin Luther, conducted no doubt by a higher Providence, but in discourse of reason, finding what a province he had undertaken against the Bishop of Rome and the degenerate traditions of the church, and finding his own solitude, being ways assailed by the opinions of his own time, was enforced to awake all antiquity, and to call former times to his succour, to make a party against the present time. So that the ancient authors, both in divinity and in humanity, which had long time slept in libraries, began generally to be read and re-

This by consequence did draw on a necessity of a more exquisite travail in the languages original, wherein those authors did write, for the better understanding of those authors, and the better advantage of pressing and applying their words. And thereof grew again a delight in their manner of style and phrase, and an admiration of that kind of writing; which was much furthered and precipitated by the enmity and opposition that the propounders of those primitive, but seeming new opinions, had against the schoolmen; who were generally of the contrary part, and whose writings are altogether in a different style and form; taking liberty to coin and frame new terms of art to express their own sense, and to avoid circuit of speech, without regard to the pureness, pleasantness, and, as I may call it, lawfulness of the phrase or word. And again, because the great labour that then was with the people (of whom the Pharisees were wont to say, "*Execrabilis ista turba, quæ non novit legem*"*), for the winning and persuading of them, there grew of necessity in chief price and request eloquence and variety of discourse, as the fittest and forciblest access into the capacity of the vulgar sort; so that these four causes concurring, the admiration of ancient authors, the hate of the schoolmen, the exact study of languages, and the efficacy of preaching, did bring in an affectionate study of eloquence and *copia*† of speech, which then began to flourish. This grew speedily to an excess; for men began to hunt more after words than matter, and more after the choiceness of the phrase, and the round and clean composition of the sentence, and the sweet falling of the clauses, and the varying and illustration of their works with tropes and figures, than after the weight of matter, worth of subject, soundness of argument, life of invention, or depth of judgment. Then grew the flowing and watery vein of Osorius, the Portugal bishop, to be in price. Then did Sturmius spend such infinite and curious pains upon Cicero the orator, and Hermogenes the rhetorician, besides his own books of periods, and imitation, and the like. Then did Car of Cambridge, and Ascham, with their lectures and writings, almost deify Cicero and Demosthenes, and allure all young men that were studious, unto that delicate and polished kind of learning. Then did Erasmus take occasion to make the scoffing echo—"Decem annos consumpsi in legendo Cice-

* The vulgar crowd, which knows not the law, is accursed.

† Fluency.

zone ;" * and the echo answered in Greek, "Ore, " And then grew the learning of the schoolmen to be utterly degenerated as barbarous. In sum, the whole inclination and bent of times was rather towards copia than weight.

Here, therefore, is the first distemper of learning, when study words and not matter; whereof though I have presented an example of late times, yet it hath been, and will be, "secundum majus et minus" in all time. And now possible but this should have an operation to discredit learning, even with vulgar capacities, when they see learned works like the first letter of a patent or limned book, with though it hath large flourishes, yet it is but a letter? It is to me that Pygmalion's frenzy is a good emblem or portrait of this vanity; for words are but the images of matter, and except they have life of reason and invention, to fall in love with them is all one as to fall in love with a picture.

But yet, notwithstanding, it is a thing not hastily to be denied, to clothe and adorn the obscurity, even of philosophy itself, with sensible and plausible elocution, for hereof we have great examples in Xenophon, Cicero, Seneca, Plutarch, and Plato also in some degree; and hereof likewise there is use. For surely, to the severe inquiry of truth, and the progress into philosophy, it is some hindrance, because it is early satisfactory to the mind of man, and quencheth the fire of further search, before we come to a just period; then if a man be to have any use of such knowledge in occasions, of conference, counsel, persuasion, discourse, the like, then shall he find it prepared to his hands in authors which write in that manner. But the excess of this is so justly contemptible, that as Hercules, when he saw the image of Aconia, Venus' minion, in a temple, said, in disdain, "Nil sacra es; † so there is none of Hercules' followers in learning, that is, the more severe and laborious sort of inquiry into truth, but will disguise those delicacies and affectations indeed capable of no civility. And thus much of the disease or distemper of learning.

The second, which followeth, is in nature worse than the former; for as substance of matter is better than beautiful words, so, contrariwise, vain matter is worse than vain words wherein it seemeth the reprehension of St. Paul was not proper for those times, but propheticall for the times follow-

* I have spent ten years in reading Cicero.

† Donkey.

‡ You possess no sanctity.

respective to divinity, but extensive to all knowledge profane vocum novitates, et oppositiones falsitatis."* For he assigneth two marks and badges of falsified science; the one, the novelty and strangeness—the other, the strictness of positions, which of necessity induce oppositions, and questions, and altercations, as so many substances in nature, which are solid, and corrupt into worms, so it is the propriety of good knowledge to putrify and to dissolve into a number of little, unwholesome, and, as I may term them, verminous, which have indeed a kind of quickness, and but no soundness of matter or goodness of quality. degenerate learning did chiefly reign amongst the rhos, having sharp and strong wits, and abundance and small variety of reading (but their wits being in cells of a few authors, chiefly Aristotle their dictator persons were shut up in the cells of monasteries), and knowing little history, either of nature or of no great quantity of matter, and infinite agitations, spin out unto us those laborious webs of learning extant in their books. For the wit and mind of man work upon matter, which is the contemplation of the God, worketh according to the stuff, and is limited if it work upon itself, as the spider worketh his web, which is endless, and brings forth indeed cobwebs of learning admirable for the fineness of thread and work, but of little use or profit.

Following short paragraph, with which he concludes his observations on this branch of the subject, is as showing that Bacon, with all his contempt of the schoolmen, was not insensible to their merits in various respects. Part of the passage is bridged in the Latin :

Anding, certain it is that if those schoolmen, to the first of truth and unwearied travail of wit, had they had and universality of reading and contemplation, they had shed excellent lights, to the great advancement of science and knowledge; but as they are, they are great

profane and vain babblings, and oppositions of words only so called.

undertakers indeed, and fierce with dark keeping: the inquiry of the divine truth, their pride inclined the oracle of God's word, and to vanish in the mixture of their own inventions; so in the inquisition of nature, they followed the oracle of God's works, and adored the deceiving formed images, which the unequal mirror of their own or a few received authors or principles, did represent. And thus much for the second disease of learning.

For the third vice or disease of learning, which is deceit or untruth, it is of all the rest the foulest, as it doth destroy the essential form of knowledge, which is but a representation of truth; for the truth of being and truth of knowing are one, differing no more than the beam and the beam reflected. This vice therefore divideth itself into two sorts—delight in deceiving, and appearing deceived; imposture and credulity, which, although they appear to be of a diverse nature, the one seeming to be cunning and the other of simplicity, yet certainly in the most part concur; for, as the verse noteth,

Peregrinatorem fugito, nam garrulus idem est

an inquisitive man is a prattler, so, upon the like ridiculous man is a deceiver: as we see it in fame, they will easily believe rumours, will as easily augment them, and add somewhat to them of his own; which Tacitus noteth, when he saith, "*Fingunt simul creduntque*:" an affinity hath fiction and belief.

He then proceeds:—

And as for the facility of credit which is yielded to opinions, it is likewise of two kinds, either when too much credit is attributed to the arts themselves, or to certain parts of any art. The sciences themselves, which have had intelligence and confederacy with the imagination of man, with his reason, are three in number, astrology, natural magic, and alchemy; of which sciences, nevertheless, the sciences are noble. For astrology pretendeth to discover correspondence or concatenation, which is between the globe and the inferior: natural magic pretendeth to

* Avoid an inquisitive man, for he is also a tale-bearer.

† They invent and believe at the same time.

these natural philosophy from variety of speculations to the multitude of works and alchemy pretendeth to make separation of all the unlike parts of bodies, which in mixtures of ours are incorporate. But the derivations and prosecutions these ends, both in the theories and in the practices, are full of error and vanity; which the great professors themselves have sought to veil over and conceal by enigmatical writings, and fleeing themselves to auricular traditions and such other wiles, to save the credit of impostors. And yet surely to obtray this right is due, that it may be compared to the businessman whereof Æsop makes the fable; that, when he died, he left his sons, that he had left unto them gold buried under wood in his vineyard, and they digged over all the ground, all gold they found none, but by reason of their stirring and turning the mould about the roots of their vines, they had a great vintage the year following. so assuredly the search and it to make gold hath brought to light a great number of good and fruitful inventions and experiments, as well for the disclosing of nature, as for the use of man's life.

And as for the overmuch credit that hath been given unto authors in sciences, in making them dictators, that their words should stand, and not counsels, to give advice; the damage is finite that sciences have received thereby, as the principal cause that hath kept them low, at a stay without growth or advancement. For hence it hath come, that in arts mechanical the first deviser comes shortest, and time addeth and perfecteth: but in sciences the first author goeth farthest, and time weareth and corrupteth. So, we see, artillery, sailing, printing, and the like, were grossly managed at the first, and by time accommodated and refined: but, contrariwise, the philosophies and sciences of Aristotle, Plato, Democritus, Hippocrates, Euclides, Archimedes, of most vigour at the first and by time degenerate and embased; whereof the reason is no other, but that in the former many wits and industries have contributed to one, and in the latter many wits and industries have been put about the wit of some one, whom many times they have rather depraved than illustrated. For as water will not ascend higher than the level of the first spring-head from whence it ascendeth, so knowledge derived from Aristotle, and exempted from liberty of examination, will not rise again higher than his knowledge of Aristotle. And therefore although the position be good, "*Oportet discipulum credere,*"* yet it must be

* A learner should believe.

coupled with this, "*Oportet edoctum judicare*;"* for we do owe unto masters only a temporary belief, and a respect of their own judgment till they be fully instructed, an absolute resignation, or perpetual captivity - and to conclude this point, I will say no more, but so the authors have their due, as time, which is the author of it, be not deprived of his due, which is, further and further to cover truth.

Resides these three diseases, however, he remarks "there are some other rather peccant humors or deformed diseases," which are not altogether to be overlooked. —

The first of these is the extreme affecting of two extremes, the one antiquity, the other novelty; wherein it seems children of time do take after the nature and malice of their father. For as he devoureth his children, so one seeketh to devour and suppress the other; while another envieth there should be new additions, and novelty; he is content to add, but it must deface: surely, the word of the prophet is the true direction in this matter, "*Stans vultus antiquas, et videte quoniam sit via recta et longa, et late in ea.*"† Antiquity deserves that reverence, it should make a stand thereupon, and discover what is the way; but when the discovery is well taken then to regression. And to speak truly, "*Antiquitas sæculi mundi.*"‡ These times are the ancient times, when time is ancient, and not those, which we account ancient "*retrogrado,*"§ by a computation backward from ourselves.

This paragraph is noticeable as containing, we think, the earliest announcement by Bacon of a thought which is, perhaps, of all the striking things that he has said, the one that most readily occurs to recollection in connexion with his name. He has himself repeated the idea of antiquity being the youth, and modernity comparatively the manhood, of the world, in other

* The educated man should judge for himself.

† Stand fast in the old ways, and see what is right, good, and walk therein.

‡ Antiquity of time is the childhood of the world.

§ In a retrograde order.

things (as he is in the habit of doing with all noble thoughts); it will be found, in particular, expanded in the First Book of the *Novum*; but it is perhaps principally indebted for its to its strong accordance with the whole spirit of Baconian philosophy. Nevertheless, from the manner in which it is here introduced as a Latin phrase, it would seem to be some reason for doubting it be an original thought of Bacon's. It has the appearance of some aphorism or adage of the

if the other errors that infest learning are thus

error, of a diverse nature from all the former, is the and peremptory reduction of knowledge into arts and from which time commonly sciences receive small mentation. But as young men, when they knit and set, do seldom grow to a further stature; so knowledge it is in aphorisms and observations, it is in growth: it once is comprehended in exact methods, it may be further polished and illustrated, and accommo-

nd, however, who, if we were to name him, would be reckoned as one of the first of living authorities on all connected with the history of learning and philosophy, that he feels certain of having never met with the or the thought in any writer previous to Bacon, at the view of modern times as the advanced age of the familiar enough. It may be added, that Bacon's words to have been received as new by his friend Sir Francis Bacon; who, in a letter thanking him for the *Novum* after having read the First Book and a few aphorisms of the Second, says, "I have learned thus much by it that we are extremely mistaken in the computation of knowledge by searching it backwards, because, indeed, the more we are the youngest, especially in points of natural knowledge and experience." It takes somewhat, however, from the authority, that he should not have been aware of the origin of the thought by Bacon fourteen years before the publication of *Advancement of Learning*.

dated for use and practice; but it increaseth no more in
and substance. . . .

Another error is an impatience of doubt, and haste to
tion without due and mature suspension of judgment.
the two ways of contemplation are not unlike the two ways
action, commonly spoken of by the ancients; the one plain
smooth in the beginning, and in the end impassable; the
rough and troublesome in the entrance, but after a while
and even, so it is in contemplation; if a man will begin
certainties, he shall end in doubts; but if he will be content
begin with doubts, he shall end in certainties. . . .

But the greatest error of all the rest is the mistake
misplacing of the last or furthest end of knowledge;
men have entered into a desire of learning and know-
sometimes upon a natural curiosity, and inquisitive app-
sometimes to entertain their minds with variety and de-
sometimes for ornament and reputation; and sometimes
enable them to victory of wit and contradiction; and
times for lucre and profession; and seldom sincerely to
true account of their gift of reason, to the benefit and
men, as if there were sought in knowledge a couch,
upon to rest a searching and restless spirit; or a terrace
wandering and variable mind to walk up and down with
prospect, or a tower of state, for a proud mind to raise
upon; or a fort or commanding ground, for strife and con-
tention; or a shop for profit or sale; and not a rich storehouse
the glory of the Creator, and the relief of man's estate.
this is that which will indeed dignify and exalt knowledge
contemplation and action may be more nearly and straitly
conjoined and united together than they have been; a con-
tention like unto that of the two highest planets, Saturn, the
of rest and contemplation, and Jupiter, the planet of civi-
lization and action: howbeit I do not mean, when I speak
of action, that end before mentioned of the applying of
knowledge to lucre and profession, for I am not ignorant how
that diverteth and interrupteth the prosecution and ad-
vancement of knowledge, like unto the golden ball thrown
Atalanta, which while she goeth aside and stoopeth to take
the race is hindered;

*Declinat cursus, aurumque volubile tollit.**

* *Turns from the course to grasp the rolling gold.*

Neither is my meaning, as was spoken of Socrates, to call philosophy down from heaven to converse upon the earth; that is to leave natural philosophy aside, and to apply knowledge only to manners and policy. But as both heaven and earth do conspire and contribute to the use and benefit of man; so this ought to be, from both philosophies to separate and reject vain speculations, and whatsoever is empty and void, and to preserve and augment whatsoever is solid and fruitful: that knowledge may not be, as a courtesan, for pleasure and vanity only, or as a bondwoman to acquire and gain to her master's use; but as a spouse, for generation, fruit, and comfort.

The abuses sometimes accompanying the love of knowledge having been thus freely censured, and objections thereby obviated, the author now proceeds to the second thing that he had proposed to accomplish in his First Book, the exposition of the dignity and worth of learning. After having adduced what he calls the divine testimony and evidence, or that which is to be discovered in the Scriptures and the works of God, he turns to human proofs. Here he is led into a digression on the benefits that follow to mankind, "when kings themselves, or persons of authority under them, or other governors in commonwealths and popular estates, are enriched with learning:"—

Which felicity of times under learned princes (to keep still the law of brevity, by using the most eminent and selected examples, doth best appear in the age which passed from the death of Domitian the emperor until the reign of Commodus: comprehending a succession of six princes, all learned, or singular favourers and advancers of learning; which age for temporal respects, was the most happy and flourishing that ever the Roman empire (which then was a model of the world) enjoyed: a matter revealed and prefigured unto Domitian in a dream the night before he was slain; for he thought there was grown behind upon his shoulders a neck and a head of gold: which came accordingly to pass in those golden times which succeeded: of which princes we will make some commemoration; wherein although the matter will be vulgar, and may be thought fitter for a declamation than agreeable to a treatise unfolded as this is, yet because it is pertinent to the point

hand, "*neque semper arcum tendit Apollo*,"* and them only were too naked and cursory, I will add altogether.

The first was Nerva; the excellent temper of whose ment is by a glance in Cornelius Tacitus touched by "*Postquam divus Nerva res olim inassociabiles inconnexum et libertatem*."† And in token of his last act of his short reign, left to memory, was a mis-adopted son Trajan, proceeding upon some inward grief at the ingratitude of the times, comprehended in Homer's:

Telis, Phœbe, tuis lacrymas ulciscere nostras

Trajan, who succeeded, was for his person not less if we will hearken to the speech of our Saviour, "*He that receiveth a prophet in the name of a prophet have a prophet's reward*," he deserveth to be placed the most learned princes: for there was not a greater of learning, or benefactor of learning, a founder of libraries, a perpetual advancer of learned men to our familiar converse with learned professors and preceptors were noted to have then most credit in court. On the side, how much Trajan's virtue and government was and renowned, surely no testimony of grave and faithful more lively set forth, than that legend tale of Magnus, bishop of Rome, who was noted for the extreme love towards all heathen excellency. and yet he is out of the love and estimation of Trajan's moral, to have made unto God passionate and fervent prayer for delivery of his soul out of hell: and to have obtained a caveat that he should make no more such petitions. prince's time also, the persecutions against the Christians were intermission, upon the certificate of Plinius a man of excellent learning and by Trajan advanced.

Adrian, his successor, was the most curious man and the most universal inquirer; insomuch as it was for an error in his mind, that he desired to com-

* *Nor does Apollo always bend the bow.*

† *When the divine Nerva united things formerly dissociable, - power and liberty.*

‡ *O Phœbus, with thy darts avenge our tears.*

and not to reserve himself for the worthiest things : fall-
 the like humour that was long before noted in Philip
 edon ; who, when he would needs over-rule and put
 n excellent musician in an argument touching music,
 I answered by him again, " God forbid, Sir," said he,
 our fortune should be so bad, as to know these things
 han I." It pleased God likewise to use the curiosity of
 peror as an inducement to the peace of his church in
 yz. For having Christ in veneration, not as a God or
 , but as a wonder or novelty ; and having his picture
 gallery, matched with Apollonius, with whom, in his
 agination, he thought he had some conformity ; yet it
 he turn to allay the bitter hatred of those times against
 istian name, so as the church had peace during his
 And for his government civil, although he did not
 o that of Trajan's in glory of arms, or perfection of
 yet in deserving of the weal of the subject he did
 him. For Trajan erected many famous monuments
 ldings ; insomuch as Constantine the Great in emula-
 :wout to call him " Parietaria " (wall flower), because
 e was upon so many walls : but his buildings and
 ere more of glory and triumph than use and necessity.
 rian spent his whole reigu, which was peaceable, in a
 ulation or survey of the Roman empire ; giving order,
 king assignation where he went, for re-edifying of
 owns, and forts decayed ; and for cutting of rivers and
 , and for making bridges and passages, and for policy-
 cities and commonalties with new ordinances and coun-
 is, and granting new franchises and incorporations, so
 whole time was a very restoration of all the lapses and
 of former times.

ninus Pius, who succeeded him, was a prince excel-
 earned ; and had the patient and subtle wit of a school-
 usomuch as in common speech, which leaves no virtue
 l, he was called " cymini sector," (a carver or divider
 min,) which is one of the least seeds ; such a patience
 and settled spirit, to enter into the least and most exact
 ces of causes ; a fruit no doubt of the exceeding tran-
 and serenity of his mind ; which being no ways
 or incumbered, either with fears, remorse, or scruples,
 ing been noted for a man of the purest goodness, with-
 fiction or affectation, that hath reigned or lived, made
 d continually present and entire. He likewise ap-
 a degree nearer unto Christianity, and became, as

Agrippa said unto St. Paul, "half a Christian;" and their religion and law in good opinion, and not only persecution, but giving way to the advancement of Christianity.

There succeeded him the first "divi fratres,"* adoptive brethren, Lucius Commodus Verus (son to Verus, who delighted much in the softer kind of learning, was wont to call the poet Martial his Virgil), and Aurelius Antoninus; whereof the latter, who obsequious colleague and survived him long, was named the philosopher, who as he excelled all the rest in learning, so he excelled likewise in perfection of all royal virtues. insomuch that he was the emperor, in his book entitled 'Cæsares,' being a pasquon or satire to deride all his predecessors, feigning they were all invited to a banquet of the gods, and Silenus the Jester set at the nether end of the table, and bestowed on every one as they came in, but when Marcus Philadelphus came in, Silenus was gravelled, and out of countenance, knowing where to carp at him; save at the last he gave glance at his patience towards his wife. And the reputation of this prince, continued with that of his predecessor, in the name of Antoninus so sacred in the world, that though extremely dishonoured in Commodus, Caracalla, and Elagabalus, who all bore the name, yet when Alexander Severus refused the name, because he was a stranger to the name, the senate with one acclamation said, "Quomodo Augustus Antoninus."† In such renown and veneration was the name of these two princes, in those days, that they would have perpetual addition in all the emperor's styles. In the emperor's time also the church for the most part was in such a state as in this sequence of six princes we do see the effects of learning in sovereignty, painted forth in the table of the world.

But for a tablet, or picture of smaller volume (meaning to speak of your majesty that liveth), in my judgment the most excellent is that of Queen Elizabeth, your immediate predecessor in this part of Britain; a princess that, if I were now alive to write lives by parallels, would trouble me I think, to find for her a parallel amongst women. She was endued with learning in her sex singular and rare amongst masculine princes; whether we speak of her

* The divine brothers.

† Such as Augustus was Antoninus is.

e, or of science, modern or ancient, divinity or human-
nd unto the very last year of her life she was accus-
o appoint set hours for reading, scarcely any young
in a university more daily, or more dully. As for her
nent, I assure myself, I shall not exceed if I do affirm
s part of the island never had forty-five years of better
and yet not through the calmness of the season, but
the wisdom of her regimen. For if there be con-
of the one side, the truth of religion established, the
t peace and security, the good administration of justice,
perate use of the prerogative, nor slackened, nor much
, the flourishing state of learning, sortable to so ex-
a patroness, the convenient estate of wealth and means,
crown and subject, the habit of obedience, and the
tion of discontents; and there be considered, on the
le, the differences of religion, the troubles of neighbour
s, the ambition of Spain, and opposition of Rome; and
at she was solitary and of herself: these things, I say,
red, as I could not have chosen an instance, so recent
proper, so I suppose I could not have chosen one more
ble or eminent to the purpose now in hand, which is
ing the conjunction of learning in the prince with
in the people.

this is very much abridged in the Latin; the
t of the Roman emperors is reduced to about a
of the space which it occupies in the original
n, and the panegyric upon Elizabeth is omitted
her.

can only afford to give one short paragraph more
ie splendid conclusion of this First Book:—

1, for the pleasure and delight of knowledge and learn-
ar surpasseth all other in nature: for, shall the plea-
the affections so exceed the senses, as much as the

turn melancholy. But of knowledge there is no satiety; satisfaction and appetite are perpetually interchangeable; therefore appeareth to be good in itself simply, without fall or accident. Neither is that pleasure of small efficacy contentment to the mind of man, which the poet Lucretius describeth elegantly.

Suave mari magno turbantibus æquora ventis, &c.

"It is a view of delight," saith he, "to stand or walk on the shore side, and to see a ship tossed with tempest upon the sea: or to be in a fortified tower, and to see two battles upon a plain; but it is a pleasure incomparable, for the mind of man to be settled, landed, and fortified in the certain truth; and from thence to descry and behold the errors, perturbations, labours and wanderings up and down of men."

Lastly, leaving the vulgar arguments, that by learning excelleth man in that wherein man excelleth beasts; that learning man ascendeth to the heavens and their motions, whither in body he cannot come and the like; let us conclude to the dignity and excellency of knowledge and learning in that whereunto man's nature doth most aspire, which is immortality or continuance: for to this tendeth generation, and raising of houses and families, to this tend buildings, foundations, monuments; to this tendeth the desire of memory, fame, celebration, and in effect the strength of all other human desires. We see then how far the monuments of wit and learning are more durable than the monuments of power or of the hands. Have not the verses of Homer continued twenty-five hundred years, or more, without the loss of a syllable or letter; during which time, infinite palaces, temples, castles, cities, have decayed, and demolished? It is not possible to have the pictures or statues of Cyrus, Alexander, Cæsar, no, nor of kings or great personages of much later years; for the originals cannot last, and the copies cannot but lose of the life and truth. But the images of men's wits and knowledges remain in books exempted from the wrong of time, and capable of perpetual renovation. Neither are they fitly to be called images, because they generate still, and cast their seeds in the minds of others, provoking and causing infinite actions and opinions succeeding ages. so that if the invention of the ship was thought to be noble, which carrieth riches and commodities from place to place, and consociateth the most remote regions in partaking their fruits, how much more are letters to be magnified.

which, as ships, pass through the vast seas of time, and make us so distant to participate of the wisdom, illuminations, and operations, the one of the other !

The new matter introduced in the Second Book of the *De Augmentis* amounts to about the quantity of the old retained. It is divided into thirteen chapters. Among the introductory remarks are the following, which are nearly the same in the Latin as in the English :—

Inasmuch as most of the usages and orders of the universities were derived from more obscure times, it is the more requisite they be re-examined. In this kind I will give an instance or two, for example sake, of things that are the most obvious and familiar. The one is a matter, which though it be ancient and general, yet I hold to be an error ; which is that scholars in universities come too soon and too unripe to logic and rhetoric, arts fitter for graduates than children and novices : for these two, rightly taken, are the gravest of sciences, being the arts of arts ; the one for judgment the other for ornament : and they be the rules and directions how to set forth and dispose matter : and therefore for minds empty and unfraught with matter, and which have not gathered that which Cicero calleth “ *sylva* ” and “ *suppellex*,” stuff and variety, to begin with those arts (as if one should learn to weigh, or to measure, or to paint the wind), doth work but this effect, that the wisdom of those arts, which is great and universal, is almost made contemptible, and is degenerate into childish sophistry and ridiculous affectation. And further the untimely learning of them hath drawn on, by consequence, the superficial and unprofitable teaching and writing of them, as fitteth indeed to the capacity of children. Another is a lack I find in the exercises used in the universities, which do make too great a divorce between invention and memory ; for their speeches are either premeditated, “ *in verbis conceptis*,”* where nothing is left to invention, or merely extemporal, where little is left to memory ; whereas in life and action there is least use of either of these, but rather of intermixtures of premeditation and invention, notes and memory ; so as the exercise fitteth nor the practice, nor the image the life ; and it is ever a true rule in exercises, that they be framed as near as may be to the life of practice ; for otherwise

* Set forms of words.

they do pervert the motions and faculties of the mind, and prepare them. The truth whereof is not obscure, when scholars come to the practices of professions, or other actions of civil life, which when they set into, this want is soon found by themselves, and sooner by others. But this part touching amendment of the institutions and orders of universities, I conclude with the clause of Cæsar's letter to Oppius and Brutus, "*Hoc quemadmodum fieri possit, nonnulla mihi in mentem veniunt, et multa reperiri possunt; de his rebus rogo vestram cogitationem suscipiat.*"

The last defect which I will note is, that there hath not been, or very rarely been, any public designation of writers or inquirers concerning such parts of knowledge as may appear to have been already sufficiently laboured or undertaken; and which point it is an inducement to enter into a view and examination what parts of learning have been prosecuted, and what omitted: for the opinion of plenty is amongst the cause of want, and a great quantity of books maketh a show rather of superfluity than lack; which sure large nevertheless is not to be remedied by making no more books, but by making more good books, which, as the serpent of Moses, might devour the serpents of the enchanter.

The author then enters upon the proper subject of the work by laying down what he calls the Partitions of the Sciences, or the General Distribution of Human Knowledge. This is an attempt that has been often made since Bacon first set the example, but hardly perhaps yet with perfect success. The general outline of Bacon's scheme is sufficiently simple. He assigns all human learning either to the Memory, to the Imagination, or to the Reason, the domain of the first being History, that of the second, Poesy; that of the third, Philosophy. The subdivisions are exhibited in a table, and the explanation of their nature, and of the extent to which they have been cultivated, or to which they remain unknown or unreclaimed, is the object of the work. This Second Book are included both History and Poesy.

I have thought of some means by which this may be effected, and many others may be devised; I request that you will be the matter into serious consideration.

DE AUGMENTIS SCIENTIARUM.

so that Philosophy alone occupies the remaining Seven Books.

History is divided into Natural and Civil; the latter however, comprehending Ecclesiastical and Literary in addition to what is commonly called Civil History. Natural History is of three sorts — of nature in course of nature erring or varying, and of nature altered or wrought; that is, History of Creatures (*Generationum*); History of Marvels (*Præter-generationum*); and History of Arts. The first is declared to be moderately well cultivated; the second and third so slightly and for so little purpose that they may be classed among the desiderata. Natural History, in reference to its utility or application, is afterwards stated to be of two kinds according as it supplies the knowledge of facts, or what Bacon calls the primitive matter (*materia prima*) of philosophy. The former he names Narrative; the latter Inductive; and the Inductive he places among the desiderata.

In treating of the three divisions of Civil History, he begins with Literary History, or that of Learning and Arts. This also he declares to be deficient. Then, proceeding to Civil History properly so called, he divides it into three kinds, Memorials, Perfect Histories, and Antiquities; "not unfitly to be compared with the three kinds of pictures or images. For, of pictures or images we see some are unfinished, some are perfect, and some are defaced, so . . . Memorials are History unfinished or the first or rough draughts of History; and Antiquities are History defaced, or some remnants of History which have casually escaped the shipwreck of time. Memorials, or preparations for history, again, are either commentaries or registers. And neither in these nor Antiquities is any deficiency asserted, beyond what belongs to their nature.

Perfect History, or History Proper, is also divided into three kinds, "according to the object which it propoundeth, or pretendeth to represent, for it either representeth a time, a person, or an action." The first the author calls *Chronicles*; the second, *Lives*; the third,

Narrations or Relations. It is in speaking of the first that he introduces the rapid review of the recent history of England, the first draught of which is found, as we have already had occasion to notice, in a letter written by him to Lord Ellesmere in April, 1605,* a few months before the publication of the *Advancement of Learning*. The passage as it stands in that work is as follows, and it is pretty closely translated in the *De Augmentis*, except that the short eulogy on the government of Elizabeth is omitted : —

But for modern Histories, whereof there are some few worthy, but the greater part beneath mediocrity (leaving care of foreign stories to foreign states, because I will not be *curiosus in aliena republica*),† I cannot fail to represent to your majesty the unworthiness of the history of England, and the main continuance thereof, and the partiality and obliquity that of Scotland in the latest and largest author that I have seen: supposing that it would be honour for your majesty, if a work very memorable, if this island of Great Britain, as it is now joined in monarchy for the age to come, so were joined in one history for the times passed; after the manner of the sacred history, which draweth down the story of the ten tribes and the two tribes, as twins, together. And if it shall seem to the greatness of this work may make it less exactly performed, there is an excellent period of a much smaller compass of time as to the story of England; that is to say, from the uniting of the roses to the uniting of the kingdoms, a portion of time wherein to my understanding, there hath been the rarest varieties that in like number of successions of any heretofore monarchy hath been known: for it beginneth with a mixed adoption of a crown by arms and title: an entry by battle, an establishment by marriage, and therefore times memorable, like waters after a tempest, full of working and swelling, though without extremity of storm, but well passed through by the wisdom of the pilot, being one of the most prudent kings of all the number. Then followeth the reign of a king, whose actions, howsoever conducted, had much intixture with the affairs of Europe, balancing and inclining them variably; in whose time also began that great alteration

* See vol. i. p. 214.

† Too inquisitive in the affairs of a foreign state.

to the state ecclesiastical, an action which seldom cometh upon the stage. Then the reign of a minor, then an offer of a usurpation, though it was but as "*feb is ephemera*"*. Then the reign of a queen, matched with a foreigner, then of a queen that lived solitary and unmarried, and yet her government so masculine, that it had greater impression and operation upon the states abroad than it any ways received from thence. And now last this most happy and glorious event, that this island of Britain, divided from all the world, should be united in itself: and that oracle of rest, given to *Æneas*, "*Attoquam exquirite matrem*,"† should now be performed and fulfilled upon the nations of England and Scotland, being now reunited to the ancient mother name of Britain, as a full period of all instability and peregrinations: so that as it cometh to pass in massive bodies, that they have certain trepidations and waverings before they fix and settle; so it seemeth that by the providence of God, this monarchy, before it was to settle in your majesty and your generations, (in which, I hope, it is now established for ever,) had these prelusive changes and varieties.

The department of Lives is described as in modern times lying much waste, and, as for Narrations and Relations of particular actions, "there were also," it is observed, "to be wished a greater diligence therein." Other divisions of History Proper follow, into Universal and Particular, and into Annals and Journals (*Acta Diurna*); then a second division of Civil History into Pure and Mixed (such as Cosmography, which is compounded of Civil and Natural History); then of Ecclesiastical History, into the General History of the Church, the History of Prophecy, and the History of Providence, or the Divine Retribution (*Nemesis*). Lastly, there are the Appendices to History; namely, Orations, Letters, and Apophthegms, or brief sayings.

The remarkable passage which commences the dissertation on Poetry is nearly the same in the *De Augmentis* as in the *Advancement*:—

POETRY is a part of learning in measure of words for the most

* A fever of brief duration.

† Seek your ancient mother (the land of your ancestors).

part restrained, but in all other points extremely licensed: doth truly refer to the imagination; which, being not to the laws of matter, may at pleasure join that which hath severed, and sever that which nature hath joined: and make unlawful matches and divorces of things; "Picturaque poetis," &c. It is taken in two senses in respect of words, or matter, in the first sense it is but a classical style, and belongeth to arts of speech, and is not pertinent to the present. In the latter, it is, as hath been said, one of the principal portions of learning, and is nothing else but feigned history, which may be styled as well in prose as in verse.

The use of this feigned history hath been to give shadow of satisfaction to the mind of man in those wherein the nature of things doth deny it, the world being in proportion inferior to the soul, by reason whereof things agreeable to the spirit of man, a more ample greatness, a more exact goodness, and a more absolute variety, than can be in the nature of things. Therefore, because the acts or events of true history have not that magnitude which satisfieth the mind of man, poesy feigneth acts and events greater and more heroic: because true history propoundeth the success or issues of actions not so agreeable to the merits of virtue or vice, therefore poesy feigns them more just in retribution: because true history representeth actions and events more ordinary, and less extraordinary, therefore poesy endueth them with more rare and more unexpected and alternative variations: so as it appeareth that, poesy serveth and conferreth to magnanimity, mirth, and to delectation. And therefore it was ever thought to afford some participation of divineness, because it doth raise and elevate the mind, by submitting the shows of things to the desires of the mind; whereas reason doth buckle and bow the mind to the nature of things. And we see, that by these means, and congruities with man's nature and pleasure, joined with the agreement and consort it hath with music, it hath access and estimation in rude times and barbarous regions where other learning stood excluded.

Poetry is divided into Narrative or Heroic, Representative or Dramatic, and Atlasive or Parabolical. The account of Parabolical Poetry is greatly extended by the introduction from the treatise *De Sapientia Veterum*.

* Painters and poets have equal privilege in fiction.

the explanations of the three fables of Pan, Perseus, and Bacchus, all of which we have given in the extracts from that treatise in our first volume.* Considerable additions, however, are here made to each of them. In Poesy our author professes to be able to report no deficiency. "For," he observes, "being as a plant that cometh of the lust of the earth, without a formal seed, it hath sprung up and spread abroad more than any other kind. But, to ascribe unto it that which is due, for the expression of affections, passions, corruptions, and customs we are beholden to poets more than to the philosophers' works; and, for wit and eloquence, not much less than to orators' harangues." "But it is not good," he concludes, "to stay too long in the theatre, let us now pass on to the judicial place or palace of the mind, which we are to approach and view with more reverence and attention."

The Third Book of the *De Augmentis*, which is divided into six chapters, also contains very nearly as much new matter as old. "All History, excellent King," it begins, to employ the old version of Watts, "treads upon the earth, and performs the office of a guide rather than of a light; and Poesy is, as it were, the dream of Knowledge; a sweet pleasing thing, full of variations, and would be thought to be somewhat inspired with divine rapture; which dreams likewise present. But now it is time for me to awake, and to raise myself from the earth, cutting the liquid air of Philosophy and Sciences." Knowledge, it is then remarked, is like the waters; of which some descend from above, and some spring from beneath. By the knowledge that descends from above Bacon means Theology; by that which springs from beneath, Philosophy. Theology, or Divinity, he leaves for the last place, "the haven and sabbath of all man's contemplations;" he now proceeds to a survey of Philosophy, which, according as it is occupied with God, Nature, or Man, he

* See vol. i. pp. 97-110.

designates Divine Philosophy, Natural Philosophy, and Human Philosophy or Humanity. "But," he adds, "because the distributions and partitions of knowledge are not like several lines that meet in one angle, and touch but in a point; but are like branches of trees, that meet in a stem, which hath a dimension and quantity of entireness and continuance before it come to discontinuance and break itself into arms and boughs; therefore it is good, before we enter into the former distribution, to erect and constitute one universal science by the name of *Philosophia Prima*, Primitive or Summary Philosophy, as the main and common way before we come where the ways part and divide themselves." His meaning, he afterwards says, touching this Original or Universal Philosophy, is, "in a plain and gross description by negative," this:—"That it be a receptacle for all such profitable observations and axioms as fall not within the compass of any of the special parts of philosophy or sciences, but are more common and of a higher stage." Thus far in the words of the *Advancement of Learning*; what follows is more extended in the *De Augmentis*; and, as the passage is material to the statement of Bacon's philosophical system, we will give it from the version of Dr. Shaw, who, although he has omitted some of the ornament, has preserved its substance:

Axioms of this kind are numerous: for example:—1. If equals are added to unequals, the wholes will be unequal. This is a rule in mathematics, which holds also in ethics, with regard to distributive justice. 2. Things agreeing to the same thing agree also with one another. This likewise is an axiom in mathematics; and at the same time so serviceable in logic, to be the foundation of syllogism. 3. Nature shows her best in her smallest works. This is a rule in philosophy that produced the atoms in Democritus; and was justly employed by Aristotle in politics, where he begins the consideration of commonwealth in a family. 4. All things change but nothing is lost. This is an axiom in physics, and holds in natural theology; for as the sum of matter neither diminishes nor increases, so it is equally the work of omnipotence to create, or annihilate it. 5. Things are preserved from destruction by bringing them back to their principles. This is an axiom

it holds equally in politics; for the preservation of well observed by Machiavel, depends upon little reforming and bringing them back to their ancient 6. A discord ending immediately in a concord sets money. This is a rule in music, that also holds true

7. A trembling sound in music gives the same to the ear, as the coruscation of water, or the sparkling to the eye. 8. The organs of the senses resemble of reflection, as we see in optics and acoustics; where glass resembles the eye, and a sounding cavity the of these axioms an infinite number might be

And thus the celebrated Persian magic was, in more than a notation of the correspondence in the and formation of things natural and civil. Nor let understand all this of mere similitudes, as they might bear; for they really are one and the same footsteps, visions of nature, made upon different matters and And in this light the thing has not hitherto been created. A few of these axioms may indeed be found ings of eminent men, here and there interspersed ly: but a collected body of them, which should nitive and summary tendency to the sciences, is not tant; though a thing of so great moment, as remark- w nature to be one and the same: which is supposed f a primary philosophy.

ader will form his own opinion from all this as er Bacon had any very distinct conception of lled *Prima Philosophia*. He goes on to state, is another part of it, which in so far as respects, indeed, is ancient, but in the thing itself, as stands it, is new. This is the inquisition con- ne adventitious conditions of entities (which may transcendental); such as paucity and multitude, and diversity, the possible and impossible, even l nonentity, and the like. It is fit, he says, that mplantation, as having no little both of dignity and not altogether deserted, but have at least some ne partitions of the sciences. But it should be . in a manner very different from that which commonly followed. "For example," (to w's translation),

No writer who has treated of much and little, endeavouring to assign the cause why some things in nature are so numerous and large, and others so rare and small; for, doubtless, it is impossible, in the nature of things, that there should be as good a quantity of gold as of iron, or roses as plenty as grass, &c. so likewise nobody that treats of like and different has sufficiently explained why, betwixt particular species, there are almost constantly interposed some things that partake of both, as moss betwixt corruption and a plant; notouless fish betwixt a plant and an animal; bats betwixt birds and quadrupeds, &c. Nor has any one hitherto discovered why iron does not attract iron, as the loadstone does, and why gold does not attract gold, as quicksilver does, &c. But of these particulars we find no mention in the discourses of transcendentials: men have rather pursued the quirks of words than the subtilties of things. And therefore we would introduce into primary philosophy, a real and solid inquiry into these transcendentials, or adventitious condition of beings, according to the laws of nature, not of speech.

Then follows a chapter on Divine Philosophy, or Natural Theology. After that we come to Natural Philosophy, which is in the first place divided into Speculative and Operative; or, the inquisition of Causes and the production of Effects; or, as they may be otherwise named, Natural Science and Natural Prudence. Speculative Philosophy, again, or Theory, is divided into Physics and Metaphysic. The term Metaphysic, however, Bacon warns us, he uses in a different sense from that commonly received. Then he proceeds, as we have the passage in his own English in the *Advancement* :—

And herein I cannot a little marvel at the philosopher Aristotle, that did proceed in such a spirit of difference and contradiction towards all antiquity, undertaking, not only to frame new words of science at pleasure, but to confound and extinguish all ancient wisdom; insomuch, as he never named or mentioned an ancient author or opinion, but to confute and improve, wherein for glory, and drawing followers and disciples, he took the right course. For certainly there comes no pass, and hath place in human truth, that which was not first and pronounced in the highest truth: “Veni in nomine Patris et recipitis me; si quis venerit in nomine meo, eum non recipiatis.”

* But in this divine aphorism (considering to whom it
plied, namely, to Antichrist, the highest deceiver) we
cern well that the coming in a man's own name, with-
ard of antiquity or paternity, is no good sign of truth,
h it be joined with the fortune and success of an "Eum
is,"† But for this excellent person, Aristotle, I will
f him that he learned that humour of his scholar, with
it seemeth, he did emulate; the one to conquer all
s, as the other to conquer all nations; wherein, never-
it may be, he may at some men's hands, that are of a
isposition, get a like title as his scholar did:

Felix terrarum prædo, non utile mundo
Editus exemplum, &c.‡

Felix doctrinæ prædo.§

me, on the other side, that do desire as much as lieth in
to ground a sociable intercourse between antiquity and
nce, it seemeth best to keep way with antiquity, "usque
;"|| and therefore to retain the ancient terms, though I
nes alter the uses and definitions according to the
its proceeding in civil government; where, although
some alteration, yet that holdeth which Tacitus wisely
"eodem magistratum vocabula."¶

sturn, therefore, to the use and acceptation of the term
ysic, as I do now understand the word; it appeareth,
t which hath been already said, that I intend, "phi-
a prima," Summary Philosophy and Metaphysic,
heretofore have been confounded as one, to be two dis-
ings. For the one I have made as a parent or common
r to all knowledge, and the other I have now brought in
ranch or descendant of natural science. It appeareth

came in the name of my father, and ye will not receive
any one comes in his own name ye will receive him.
e will receive him.

lucky plunderer of mankind; his name
nd vile example now are doomed to shame.

lucky plunderer of learning.

o the altar, i. e., to the extreme.

The judicial forms remain the same.

likewise that I have assigned to summary philosophy the most principles and axioms which are promiscuous and common to several sciences: I have assigned unto it likewise inquiry touching the operation of the relative and accidental characters of essences, as quantity, similitude, diversity, mobility, and the rest, with this distinction and provision that they be handled as they have efficacy in nature, and usually. It appeareth likewise that Natural Theology, heretofore hath been handled confusedly with Metaphysics, have enclosed and bounded by itself. It is, therefore, a question what is left remaining for Metaphysics; where may, without prejudice, preserve thus much of the constant antiquity, that Physic should contemplate that which is inherent in matter, and therefore transitory; and Metaphysics that which is abstracted and fixed. And, again, that Physic should handle that which supposeth in nature only a being moving, and Metaphysics should handle that which supposeth further in nature a reason, understanding, and plant. But the difference, perspicuously expressed, is most far and sensible. For as we divided natural philosophy into two parts, the inquiry of causes and productions of effects, so in that part which concerneth the inquiry of causes we do subdivide according to the received and sound division of causes into two parts, which is Physic, inquireth and handleth the material and efficient causes, and the other, which is Metaphysics, handleth the formal and final causes.

Physic, taking it according to the derivation, and according to our idiom for medicine, is situate in a middle term or distance between natural history and Metaphysics. For natural history describeth the variety of things; Physic the causes, but variable or respective causes, and Metaphysics the fixed and constant causes.

*Limus ut hic durescit, et hæc ut cera liquescit,
Utro eodemque igni :**

Fire is the cause of induration, but respective to clay; the cause of colligation, but respective to wax; but fire is a constant cause either of induration or colligation: so the physical causes are but the efficient and the matter.

-
- * The clay is hardened and the wax dissolved
By the same changeless fire.

Physic is next divided into three doctrines or branches ; according as it relates to the principles of things, to the universe or fabric of things, or to things considered in their multiplicity and variety. This last again is subdivided into two branches, the physic of Concretes and the Physic of Abstracts. Under the head of Concrete Physic, a long disquisition follows on the subject of astronomy and astrology, which is highly curious in some respects, but makes no part of the Baconian philosophy, and does not admit of abridgment. Astronomy, Bacon describes as having its foundations not ill laid in the phenomena, but as neither raised to any height nor even constructed with any solidity so far as it has been carried, astrology he considers to be, for the most part, destitute of any foundation whatever. He suggests, however, some rules or precepts for the establishment of what he calls a sound astrology. Abstract Physic is divided into two parts, the doctrine of the Schemes of matter, and the doctrine of Appetites and Motions. The schemes of matter are enumerated as being density, rarity, gravity, levity, heat, cold, tangibility, pneumatic (or airy); volatility, fixity, determinate, fluid, humid, dry, fat, lean; hard, soft; fragile, tensile; porous, united; continuous, jejune; simple, compound; absolute, imperfectly mixed; fibrous and venous, of simple positions or equal, similar, dissimilar; specificate, non-specificate; organic, inorganic, animate, inanimate. Appetites and motions, again, are either Simple or Compound. Finally, there are two Appendages to Physic, Natural Problems, and the Placets or opinions of the ancient philosophers; both referring not so much to the matter as to the manner of inquiry, the former an appendage to the physic of Nature multiplied or spread out, the latter to that of Nature united. In other words, the Problems comprehend doubts as to particulars; the Placets, general questions as to the principles and fabric of the universe. Here is the paragraph, as it stands in the *Advancement* (from which it is very slightly altered in the *De Augmentis*) on the Placets, or differing opinions, of the ancient philosophers, Pythagoras, Philolaus, Xenophanes, Anaxa-

goras, Parmenides, Leucippus, Democritus, and others "touching the principles of nature, and the fundamental points of the same, which have caused the diversity of sects, schools, and philosophers:"—

For, although Aristotle, as though he had been of the race of the Ottomans, thought he could not reign except the first; yet he did he killed all his brethren, yet to those that seek truth, and not magistrality, it cannot but seem a matter of profit, to see before them the several opinions touching the foundations of nature; not for any exact truth that can be expected in those theories; for, as the same phenomena of astronomy are satisfied by the received astronomy of the diurnal motion, and the proper motions of the planets, with eccentrics and epicycles, and likewise by the theory of Copernicus, who supposed the earth to move, (and the calculations are indifferently agreeable to both,) so the ordinary face and view of experience is many times satisfied by several theories and philosophies; whereas to find the real truth requires another manner of severity and attention. For, as Aristotle saith, that children at the first will call every woman mother, but afterwards they come to distinguish according to true experience, if it be in childhood, will call every philosopher mother, but, when it cometh to ripeness, it will discern the true mother. So, as in the mean time it is good to see several glosses and opinions upon nature, whereof, it may be that every one in some one point hath seen clearer than his fellow; therefore, I wish some collection to be made, painfully and understandingly, "*de antiquis philosophis*,"* out of all the possible light which remaineth to us of them, which kind of work I find deficient. But here I must give warning, that it be done distinctly and severally; the philosophies of every age throughout by themselves, and not by titles packed and put up together as hath been done by Pantarch. For it is the unity of a philosophy in itself which giveth it light and coherence; whereas, if it be singled and broken, it will seem foreign and dissonant. For, as when I read in Tacitus the actions of Nero, or Claudius, with circumstances of time, inducements, and occasions, I find them not so strange, but when I read them in Suetonius Tranquillus, gathered into

* On the ancient systems of philosophy.

ed bundles, and not in order of time, they seem more monstrous and incredible: so is it of any philosophy reported entire, and dismembered by articles. Neither do I exclude opinions of latter times to be likewise represented in this Menælar of sects of philosophy, as that of Theophrastus Paracelsus, eloquently reduced into a harmony by the pen of Severinus the Dane; and that of Tilesius, and his scholar Dominus, being as a pastoral philosophy, full of sense, but of no great depth; and that of Fraecastorius, who, though he pretended not to make any new philosophy, yet did use the absoluteness of his own sense upon the old; and that of Gilbertus our countryman, who revived, with some alterations and demonstrations, the opinions of Xenophanes, and any other worthy to be admitted.

Proceeding now to Metaphysics, to which he has assigned the inquiry into formal and final causes, Bacon begins by combating "the received and inveterate opinion, that the inquisition of man is not competent to find out essential forms, or true differences." It is necessary that we should give in full what he says upon this matter, his views in regard to which colour much both of the language and the substance of his philosophy. The passage, though occupying a different position in the *Advancement*, is nearly the same there as in the *De Augmentis*. After remarking "that the invention of forms is of all other parts of knowledge the worthiest to be sought, if it be possible to be found," he goes on, in his own English, as follows:—

As for the possibility, they are ill discoverers that think there is no land, when they can see nothing but sea. But it is manifest that Plato in his opinion of ideas, as one that had a wit of elevation, situate as upon a cliff, did descry, "That forms were the true object of knowledge," but lost the real part of his opinion, by considering of forms as absolutely abstracted from matter, and not confined and determined by matter; and so turning his opinion upon theology, wherewith all natural philosophy is infected. But if any man shall keep continual watchful and severe eye upon action, operation, and the use of knowledge he may advise and take notice what are the forms, the disclosures whereof are fruitful and important to the state of man. For as to the forms of substance

man only except, of whom it is said, "Formavit limo terræ, et spiravit in faciem ejus spiraculum;" not, as of all other creatures, "Producant aquæ terra;"† the forms of substances, I say, as they are compounded and transplanting multiplied, are such as they are not to be inquired; no more than it is possible or to purpose to seek in gross the forms of the words which make words, which by composition and transposition of letters, are infinite. But, on the other side, to inquire of those sounds or voices which make simple letters comprehensible, and being known, induceth and discovereth the forms of all words, which consist and are compounded of them. In the same manner to inquire the form of an oak, of gold; nay, of water, of air, is a vain pursuit; to inquire the forms of sense, of voluntary motion, of colour, of gravity and levity, of density, of temperature of cold, and all other natures and qualities, which the alphabet, are not many, and of which the essences, matter, of all creatures do consist, to inquire, I say, the forms of these, is that part of Metaphysic which is the fine of. Not but that physick doth make inquiry into the consideration of the same natures, but how? Of the material and efficient causes of them, and not as of the forms. For example; if the cause of whiteness in snow or in milk be inquired, and it be rendered thus, that the subtle parts of air and water is the cause, it is well rendered; but whiteness, is this the form of whiteness? No; but the efficient, which is ever but "*vehiculum formæ*."‡ Metaphysic I do not find laboured and performed; I marvel not, because I hold it not possible to be so; that course of invention which hath been used; in which men, which is the root of all error, have made too great a departure and too remote a recess from particulars.

But the use of this part of Metaphysic, which is deficient, is of the rest the most excellent in two respects; one, because it is the duty and virtue of all knowledge to abridge the infinity of individual experience, as far as the conception of truth will permit, and to remedy the

* He formed man of the dust of the ground, and breathed into his nostrils the breath of life.

† Let the waters bring forth; let the earth bring forth. The vehicle or supporter of its form.

DE AUGMENTIS SCIENTIARUM.

of "vita brevis, ars longa,"* which is performed by uniting the notions and conceptions of science. For knowledges are pyramids, whereof history is the basis. So of Natural Philosophy, the basis is natural history, the stage next the basis Physic, the stage next the vertical point is Metaphysic for the vertical point, "Opus quod operatur Deus a principio usque ad finem,"† the summary law of nature, we know not whether man's inquiry can attain unto it. But to use these be the true stages of knowledge, and are to them that are improved no better than the giants' hills.

Ter sunt conati imponere Pelio Ossam,
Scilicet, atque Ossæ frondosum involvere Olympum ‡

But to those which refer all things to the glory of God, they are as the three acclamations, "Sancte, sancte, sancte,"§ holy in the description or dilatation of his works; holy in the context or concatenation of them, and holy in the union of them in a perpetual and uniform law. And therefore the speculation was excellent in Parmenides and Plato, although but a speculation in them, that all things by scale and ascent to unity. So then always that knowledge is worthiest which is charged with least multiplicity, which appeareth to be Metaphysic; as that which considereth the simple forms and differences of things, which are few in number, and the degrees and co-ordinations whereof make all this variety.

The second respect, which valueth and commendeth this part of Metaphysic, is that it doth enfranchise the power of man unto the greatest liberty and possibility of works and effects. For Physic carrieth men in narrow and restrained ways, subject to many accidents of impediments, imitating the ordinary flexuous courses of nature, but "latæ und quæ sapientibus viæ : "|| to sapience, which was anciently well called

* Life is short, art is long.

† The work which God worketh from the beginning to the end.

‡ Thrice they essayed in their gigantic might
To heave up Ossa on mount Pelion's height,
Then roll Olympus upon Ossa's crown
With all its naked rocks and forests brown.

§ Holy, holy, holy.

|| The paths of the wise are extended in every direction.

he "*rerum divinarum et humanarum scientia*,"* the choice of means: for physical causes give light to notion "*in similibus materia*." † But whosoever knoweth a knoweth the utmost possibility of superinducing that upon any variety of matter: and so is less restrained in action, either to the basis of the matter, or the condition efficient; which kind of knowledge Solomon likewise, in a more divine sense, elegantly describeth: "*Non arduus gressus tui, et currens non habebis offendiculum*," ways of sapience are not much liable either to partial chance.

As for the Second Part of Metaphysic, the into Final Causes (that is, the ends or purposes of Bacon complains that it has been usually assigned to Metaphysic, but to Physic. And "this misapprehension he adds, " hath caused a deficiency, or at least improficiency, in the sciences themselves. The handling of Final Causes, mixed with the rest, in inquiries hath intercepted the severe and diligent of all real and physical causes, and given men a disposition to stay upon these satisfactory § and causes, to the great arrest and prejudice of further discovery. For this I find done not only by Philosophers ever anchoreth upon that shore, but by Aristotle and others, which do usually likewise fall upon

* The knowledge of divine and human things.

† In similar materials.

‡ Thy ways shall not be straitened, and thou shalt not be stumbled by a stumbling-block in thy course.

§ That is, causes that satisfy although they ought not. In the *De Augmentis*, the phrase is "*speciosis et unum causis*." The supposed final causes may be said to satisfy in a shadow satisfies. They satisfy the discernment the distinction between the shadow and the substance. Now, we shall find the syllogism, although stated to be less for the establishment of principles in natural philosophy yet admitted to be even there of use "by way of a more satisfactory reason." And it is evident that the mind is often be satisfied by an argument which is not absolutely conclusive.

of discoursing causes. For to say that the hairs of eyelids are for a quickset and fence about the sight; that the firmness of the skins and hides of living creatures is to defend them from the extremities of heat or cold; or, that the bones are for the columns or beams whereupon the frames of the bodies of living creatures are built; or, that the leaves of trees are for the protecting of the fruit; or, that the clouds are for covering of the earth; or, that the solidness of the earth is for the station and mansion of living creatures; and so like; is well inquired and collected in Metaphysic; but in Physic they are impertinent. Nay, they are need but resources and hinderances to stay and sluggishness from farther sailing, and have brought this to us, that the search of the physical causes hath been neglected and passed in silence." He professes, however, not to speak thus as holding either that those final causes are not true, or that they are not worthy to be inquired into. He would only have them kept within their own province, and out of that of physical causes. Then, he observes, are extremely deceived if they think that there is any enmity or repugnancy at all between the two. "For the cause rendered, that the hairs about the eyelids are for the safeguard of the sight, doth not impugn the cause rendered, that pilosity is incident to the effects of moisture. . . . Nor the cause rendered, that the firmness of hides is for the armour of the body against the extremities of heat or cold, doth not impugn the cause rendered, that contraction of pores is incident to the outward parts in regard of their adjacence to foreign unlike bodies. And so of the rest; both causes being true and compatible; the one declaring an intention, the other a consequence only."

What remains of this Third Book need only be very briefly noticed. Operative Philosophy is divided, like speculative, into two parts; Mechanic, corresponding to Physic; and Magic, corresponding to Metaphysic. But Magic Bacon understands nothing more than that science which, as he defines it, deduces the knowledge of hidden forms for the production of wonderful effects,

and by conjoining, as we are wont to say, the act with the passive (that is, the energy of the living experimenter with the powers and capabilities of the matter) reveals or brings forth the miracles of nature. Lastly, he comes to Mathematics; which, he observes, is commonly arranged as a third principal part along with Physic and Metaphysic, but which he conceives more properly to be considered only as an Appendix to the latter. "But," he afterwards adds (to adopt Shaftesbury's translation), "as we regard not only truth and order, but also the benefits and advantages of mankind, it seems best, since Mathematics is of great use in Physics, Metaphysics, Mechanics, and Magics, to make it an appendix or auxiliary to them all. And this we are in some measure obliged to do, from the fondness and towering notions of mathematicians, who would have their sciences preside over Physics. It is a strange fatality that Mathematics and Logics, which ought to be but handmaids to Physics, should boast their certainty before it, and attempt to exercise dominion against it." The Mathematics are stated to be either Pure or Mixed. And then comes the *Advancement* the following concluding paragraph which is omitted in the *De Augmentis* :—

In the mathematics I can report no deficiency, except that men do not sufficiently understand the excellent use of pure mathematics, in that they do remedy and cure many defects in the wit and faculties intellectual. For, if the wit is dull, they sharpen it; if too wandering, they fix it, if too inherent in the sense, they abstract it. So that, as tennis is a game of no use in itself, but of great use in respect it makes a quick eye and a body ready to put itself into all postures; so in the mathematics, that use which is collateral and intervenient is no less worthy than that which is principal and intended.

The Fourth Book of the *De Augmentis* contains thirteen Chapters; and the new matter is of considerably greater amount than the old. After a brief exordium, it proceeds :—

We come, therefore, now to that knowledge whereunto the ancient oracle directeth us, which is the knowledge of

; which deserveth the more acute handling, by how it toucheth us more nearly. This knowledge, as it is called and term of natural philosophy in the intention of so notwithstanding, it is but a portion of natural philosophy in the continent of nature; and generally let this be a hat all partitions of knowledges be accepted rather for and veins, than for sections and separations; and that continuance and entireness of knowledge be preserved. The contrary hereof hath made particular sciences to become shallow, and erroneous, while they have not been nourished and maintained from the common fountain. So we see in the orator complained of Socrates and his school, that was the first that separated philosophy and rhetoric; where rhetoric became an empty and verbal art. So we may see at the opinion of Copernicus touching the rotation of the earth, which astronomy itself cannot correct, because it is not correspondent to any of the phenomena, yet natural philosophy correct. So we see also that the science of medicine, if destituted and forsaken by natural philosophy, it is not much better than an empirical practice.

In the *De Augmentis* the condemnation of the Copernican doctrine of the rotation of the earth is retained without further alteration than the insertion of the parenthesis, “quae nunc quoque invaluit” (which now hath come to be prevalent).

The Science of Man is in the first place divided by Bacon into the Philosophy of Humanity properly so called, being that which regards man segregated, or as an individual; and Civil Philosophy, or that which regards men congregated in society. And the former is divided into the knowledge which concerns the Body, and the knowledge which concerns the Mind. But, besides these, there is also the General Science of the Nature and State of Man, comprehending those things which are common both to the body and the mind; and likewise is divisible into two branches; the one occupying itself with the undivided nature of man, the other with the connexion between the mind and the body.

The former, therefore, may be called the doctrine of the Person of man; the latter, the doctrine of the Confederation. Further, the doctrine of the Person comprehends contemplations respecting the Miseries of the Human

race; secondly, contemplations respecting the Prerogatives and Excellencies. So also, "as all leagues and amities consist of mutual intelligence and mutual offices, the knowledge of the Confederacy between the body and the mind may be divided into two parts; the first teaching how the one discloseth the other, the second, how the one worketh upon the other; the former the doctrine of Discovery or Indication, the latter that of Impression. From the doctrine or science of Discovery have sprung the two arts of Physiognomy and the Exposition of Dreams; both arts of prediction or prenotation, "whereof the one is honoured with the inquiry of Aristotle, and the other of Hippocrates." "And," adds Bacon, "although they have of later time been used to be coupled with superstitious and fantastical arts, yet, being purged and restored to their true state, they have both of them a sound ground in nature, and a profitable use in life." The doctrine of Impression, again, hath the same antistrophe with that of Discovery; "for the consideration is double; either how and how far the humours and effects of the body do alter or work upon the mind; or again, how and how far the passions or apprehensions of the mind do alter or work upon the body." The former subdivision may be considered as answering to Physiognomy; the latter to the philosophy of Dreams.

The reader may perceive, from this specimen, how much Bacon retained of the manner of thinking characteristic of the schoolmen, whom he held in such contempt; and also, perhaps, how insufficient this method of distinctions is to exhaust or completely expound the subject to which it is applied. The truth is, that the principle of subdivision upon which it proceeds may in all cases be carried on *ad infinitum*; and, with all its parade of thorough investigation, stop where it may, it is never really at the end of its work. Logically at least, that is, in thought, if not in the actual state of things, the last subdivision will always be further divisible: it must always contain a positive and a negative in reference to any new consideration with which the mind may choose to connect it.

Proceeding now, in the Second Chapter, to the Science

body of man, our author divides that into four—the art of Medicine, which regards health; the art, or art of decoration, which regards beauty; athletic art, or art of activity, which regards pleasure; and the Voluptuary art, which regards pleasure. There is a part of what follows on the art of medicine, as it stands in the *Advancement*, from which is most literally translated in the *De Augmentis*:—

The ancient opinion that man was microcosmus, an abstract of the world, hath been fantastically strained by Paracelsus and the alchemists, as if there were to be found in man's body main correspondences and parallels, which should have to all varieties of things, as stars, planets, minerals, existent in the great world. But thus much is evidently true of all substances which nature hath produced, man's body is the most extremely compounded: for we see herbs and man are nourished by earth and water; beasts for the most part by herbs and fruits; man by the flesh of beasts, birds, herbs, grains, fruits, water, and the manifold alterations, and preparations of these several bodies, before they become his food and aliment. Add hereunto, that beasts have a more simple order of life, and less change of affections, upon their bodies: whereas man in his mansion, sleep, passions, hath infinite variations: and it cannot be denied that the body of man of all other things is of the most compounded mass. The soul on the other side is the most simple of substances, as is well expressed:

— Purumque reliquit

hereum sensum atque aurai simplicis ignem.*

It is no marvel though the soul so placed enjoy no rest, if the principle be true, that “*Motus rerum est rapidus extra locum, placidus in loco.*”† But to the purpose: this variable motion of man's body hath made it as an instrument easy to be moved; and therefore the poets did well to conjoin music with medicine in Apollo: because the office of medicine is but to tune his curious harp of man's body and to reduce it to a more simple motion. So then the subject being so variable, hath made

But incorrupt he left our heavenly part,
And the pure flame God kindles in the heart.
*motion of things is rapid when out of place, placid
in place.*

the art by consequence more conjectural, and the art being conjectural hath made so much the more place to be left to imposture.

And therefore I cannot much blame physicians, that they use commonly to intend some other art or practice, which they fancy more than their profession. For you shall have of them antiquaries, poets, humanists, statesmen, merchants, divines, and in every of these better seen than in their profession; and no doubt upon this ground, that they find that mediocrity and excellency in the art maketh no difference in profit or reputation towards their fortune; for the weakness of patients, and sweetness of life, and nature of hope, maketh men depend on physicians with all their defects. But, nevertheless, the things which we have spoken of, are courses begotten between a little occasion, and a great deal of sloth and default; for if we will excite and awake our observation, we shall see in familiar instances what a predominant faculty the subtilty of spirit hath over the variety of matter or form. Nothing more variable than faces and countenances, yet men can bear in memory the infinite distinctions of them; nay, a painter with a few stells of colours, and the benefit of his eye and habit of his imagination, can imitate them all that ever have been, and or may be, if they were brought before him. Nothing more variable than voices; yet men can likewise discern them personally: nay, you shall have a buffoon or pantomimus will express as many as he pleaseth. Nothing more variable than the differing sounds of words; yet men have found the way to reduce them to a few simple letters. So that it is not the insufficiency or incapacity of man's mind, but it is the remote standing or placing thereof, that breedeth these mistakes and incomprehensions; for as the sense afar off is full of mistaking, but is exact at hand, so is it of the understanding; the remedy whereof is, not to quicken or strengthen the organ, but to go nearer to the object; and therefore there is no doubt but if the physicians will learn and use the true approaches and avenues of nature, they may assume as much, as the poet saith

Et quoniam variant morbi, variabimus artes;

*Mille mali species, mille salutis erunt.**

Which that they should do, the nobleness of their art doth deserve: well shadowed by the poets, in that they made *Æsc*

* Diseases vary, we must vary art,
And thousand cures to thousand pains impart.

lapius to be the son of the Sun, the one being the fountain of life, the other as the second stream: but infinitely more honoured by the example of our Saviour, who made the body of man the object of his miracles, as the soul was the object of his doctrine. For we read not that ever he vouchsafed to do any miracle about honour or money, except that one for giving tribute to Cæsar; but only about the preserving, sustaining, and healing the body of man.

In the *De Augmentis*, what follows the two Latin lines (from Ovid) is transferred to the commencement of the passage.

Medicine is divided into three kinds, according as its object is the preservation of health, the cure of diseases, or the prolongation of life; and much more is added on each of these heads, which our limits compel us to pass over. A few observations on the Cosmetic, Athletic, and Voluptuary arts close the chapter.

In Chapter Third that portion of Human Philosophy which concerns the Mind or Soul is first divided into two parts; that which treats of the rational soul, and that which treats of the irrational; and then into other two; "the one, that inquireth of the substance or nature of the soul or mind; the other, that inquireth of the faculties or functions thereof." The science of Divination and the science of Fascination are considered as appendices to the science of the Faculties. Fascination is defined to be the power and action of the imagination making itself to be felt upon other bodies than the body of the imaginant. "Wherein," our author proceeds, "the school of Paracelsus, and the disciples of pretended natural magic, have been intemperate, as they have exalted the power of the imagination to be much one with the power of miracle-working faith. Others, that draw nearer to probability, calling to their view the secret passages of things, and especially of the contagion that passeth from body to body, do conceive it should likewise be agreeable to nature that there should be some transmissions and operations from spirit to spirit without the mediation of the senses; whence the conceits have grown, now almost made civil [popularly believed], of

the mastering spirit, and the force of confidence, and the like." In the *De Augmentis* are added, as other examples, men accounted unlucky and ominous, and strokes of love and of envy. The passage in the *Advancement* goes on:—

Incident unto this is the inquiry how to raise and fortify the imagination: for if the imagination fortified have power, then it is material to know how to fortify and exalt it. And here comes in crookedly and dangerously a palliation of a great part of ceremonial magic. For it may be pretended that ceremonies, characters, and charms, do work, not by any tacit sacramental contract with evil spirits, but serve only to strengthen the imagination of him that useth it; as images are used by the Roman church to fix the cogitations, and raise the devotions of them that pray before them. But for mine own judgment, if it be admitted that imagination hath power, and that ceremonies fortify imagination and that they be used sincerely and intentionally for that purpose, yet I should hold them unlawful, as opposing to that first edict which God gave unto man, "In sudore vultus comedet panem tuum"*. For they propound those noble effects, which God hath sent forth unto man to be brought at the price of labour, to be attained by a few easy and slothful observances.

Bacon's belief in the power of imagination, which he here describes, and which may be regarded as of the same nature with the modern Mesmerism, is still more evident from other parts of his writings, and especially from the Tenth Century of the *Sylva Sylvarum*. And there, it may be remarked, he expresses no scrupulosity about the lawfulness of employing the power; on the contrary, he throws out various suggestions for strengthening and exalting it.

This Third Chapter is concluded by some observations which are not in the *Advancement*, on two branches of knowledge described as having a reference principally to the faculties of the inferior or sensible soul (or that which man has in common with the brutes), namely, the doctrine of Voluntary Motion and the doctrine of Sense and Sensibility. In the treatment of the latter, there are two very important matters, Bacon con-

* In the sweat of thy brow shalt thou eat thy bread.

ceives, that have been neglected ; the difference between sense and perception, and the form of light. By perception, which he says resides in almost all natural bodies, he seems to mean nearly the same thing that modern chemistry is called elective affinity ; although he also confounds with that some of the effects of gravitation, of heat, and even of the principle of vegetable and animal life. In regard to light, he complains that its radiations have been treated of, but not their origin ; and this and other defects he traces to the treatment of perspective as simply a branch of the mathematics. By the form of light Bacon must be understood to mean here nearly what would in common parlance be called its nature. He wishes the inquiry to be extended from the mere effects of light to its constitution or substance—to the examination, as he puts it, of what it is that is common to the emanations perceived by the eye to proceed from the sun and those perceived to proceed from rotten wood or the putrid scales of fish. Modern philosophy has turned very little of its attention to investigations of this latter description ; and those who are fondest of proclaiming Bacon as the father of modern physics are not usually anxious to exhibit him as patronising such speculation. But they enter largely into his system of philosophy he has himself expounded it.

The Fifth Book of the *De Augmentis* is also extended to more than double the space occupied by the same portion of the subject in the *Advancement of Learning*. It consists of five chapters. This Fifth Book makes an especially important part of Bacon's exposition both of his own system and of his views of the old logic.

He begins by observing that the doctrine of the Intellect of man and that of his Will are as it were twinned by birth. For purity of intellectual light and freedom of will began together and perished together. Nor is there in the whole universe of nature so intimate a sympathy as that between truth and goodness. The more shame therefore to learned men, if for knowledge they be like winged angels, but in their desires like serpents crawling.

ing in the dust; bearing about with them minds resembling, indeed, a mirror, but a mirror foully stained. The two parts into which the Science of the Human Mind is commonly divided, one, Logic, is concerned with the understanding and the reason; the other, Ethics, with the will, appetites, and affections. The passage in the *De Augmentis* then proceeds nearly as the *Advancement*:—

It is true that the imagination is an agent or “nuncius,”* both provinces, both the judicial and the ministerial. Sense sendeth over to imagination before reason have judged, and reason sendeth over to imagination before the decree can be acted: for imagination ever precedeth voluntary motion. Saying that this Janus of imagination hath differing faces, for the face towards reason hath the print of truth, but the face towards action hath the print of good; which nevertheless are faces,

Quales decet esse sororum.†

Neither is the imagination simply and only a messenger; it is invested with or at leastwise usurpeth no small authority in itself, besides the duty of the message. For it was well said by Aristotle, “That the mind hath over the body that commandment, which the lord hath over a bondman; but the reason hath over the imagination that commandment which a magistrate hath over a free citizen;” who may come also to rule in his turn. For we see that, in matters of faith and religion, we raise our imagination above our reason; which is the cause why religion sought ever access to the mind by similitudes, types, parables, visions, dreams. And again, in all persuasions that are wrought by eloquence, and other impressions of like nature, which do paint and disguise the true appearance of things, the chief recommendation unto reason is from the imagination.

The part of Human Philosophy, which is rational, is of all knowledges, to the most wise, the least delightful, and seemed but a net of subtilty and spinosity. For as it was truly said, that knowledge is “pabulum animi;”‡ so in the nature of

* Messenger.

† As the faces of sisters should be.

‡ Food of the mind.

appetite to this food, most men are of the taste and h of the Israelites in the desert, that would fain have re-
 “ad ollas carnum,”* and were weary of manna; which,
 it were celestial, yet seemed less nutritive and comfort-
 So generally men taste well knowledges that are
 ed in flesh and blood, civil history, morality, policy,
 the which men’s affections, praises, fortunes, do turn and
 nversant; but this same “lumen siccum”† doth parch
 fend most men’s watery and soft natures. But, to speak
 of things as they are in worth, rational knowledges are
 ys of all other arts: for as Aristotle saith aptly and ele-
 , “that the hand is the instrument of instruments, and
 nd is the form of forms:” so these be truly said to be
 of arts: neither do they only direct, but likewise confirm
 rengthen; even as the habit of shooting doth not only
 to shoot a nearer shoot, but also to draw a stronger bow.

e Logical Arts, or, as they are called in the *Advance-*
 the Arts Intellectual, are declared to be four in
 er; “divided according to the ends whereunto they
 eferred. For man’s labour is to invent that which
 ght or propounded; or to judge that which is in-
 d; or to retain that which is judged; or to deliver
 hat which is retained. So as the arts must be four:
 Inquiry or Invention; art of Examination or Judg-
 ; art of Custody or Memory; and art of Elocution
 adition.” In the *De Augmentis* the expression in
 last sentence is *Artes Rationales* (the Rational
 ; and it must be borne in mind that by Logic
 understands the whole science of the operations
 e Reason and the Understanding.

is in the Second Chapter, which treats of the art of
 tion, that the additions made in the Latin work are
 most considerable. The commencing portion of the
 isition, however, is translated with little alteration
 the *Advancement*:—

ention is of two kinds, much differing: the one of arts
 iences; and the other, of speech and arguments. The
 r of these I do report deficient; which seemeth to me to
 h a deficiency as if, in the making of an inventory touch-

* To the flesh-pots.

† Dry light.

ing the estate of a defunct, it should be set down, though no ready money. For as money will fetch all other commodities, so this knowledge is that which should purchase rest. And like as the West Indies had never been discovered if the use of the mariner's needle had not been first discovered, though the one be vast regions, and the other a small island, so it cannot be found strange if sciences be no farther discovered if the art itself of invention and discovery hath been discovered.

That this part of knowledge is wanting to my judgment I plainly confessed; for first, logic doth not pretend to be the sciences, or the axioms of sciences, but passeth it over to "cuique in sua arte credendum."* And Celsus acknowledges it gravely, speaking of the empirical and dogmatical physicians, "That medicines and cures were first found out, and then after the reasons and causes were discoursed; the causes first found out, and by light from them the medicines and cures discovered." And Plato, in his Theætetus, acknowledges "That particulars are infinite, and the higher generalizations no sufficient direct ones; and that the pith of a science, which maketh the artisan differ from the inexpert, is in the propositions, which in every particular knowledge are derived from tradition and experience." And therefore we find they which discourse of the inventions and originals of things refer them rather to chance than to art, and rather to birds, fishes, serpents, than to men.

Dictamnū genetrix Cretæa carpit ab Ida,
 Puberibus caulem folius et flore comantem
 Purpureo: non illa feris incognita capris
 Gramina, cum tergo volucres hæsere sagittæ.†

So that it was no marvel, the manner of antiquity to consecrate inventors, that the Egyptians had so few idols in their temples, but almost all brute.

* Every man is to be believed in his own art.

† But now the goddess mother, moved with grief
 And pierced with pity, hastens her relief;
 A branch of healing dittany she brought,
 Which in the Cretan fields with care she sought:
 Rough is the stem which woolly leaves surround;
 The leaves with flowers, the flowers with purple crown
 Well known to wounded goats - a sure relief
 To draw the pointed steel, and ease the grief.

*Omni-genamque Deū monstrat, et latratæ Anubis,
Contra Neptunum, et Venerem, contraque Minervam, &c.**

And, if you like better the tradition of the Greeks, and ascribe the first inventions to men, yet you will rather believe that Prometheus first struck the flint, and marvel'd at the spark, than that when he first struck the flint he expected the spark, and therefore we see the West Indian Prometheus had no intelligence with the European, because of the difference which there is of flint that gave the first occasion. So as it would seem that hitherto men are rather beholden to a wild goat for surgery, or to a nightingale for music, or to the bee for some part of physics, or to the pot-lid that flew open for artillery, or generally to chance or anything else, than to logic, for the invention of arts and sciences. Neither is the form of invention which Virgil describes much other.

*Ut varias usus meditando extunderet artes
Paulatim.†*

For if you observe the words well, it is no other method than that which brute beasts are capable of, and do put in use; which is a perpetual intending or practising some new thing, urged and imposed by an absolute necessity of conservation of being. for so Cicero saith very truly, "Usus autem res deditur naturam et artem sæpe vincit."‡ And therefore if it be said of men,

*— Labor omnia vincit
Improbis, et duris urgens in rebus ogestas!§*

* They worship Gods of every monstrous shape,
The bull, the dog, the ibis, and the ape;
And set these horrid deities above
The lovely progeny of mighty Jove.

† That old Experience pondering on its store
And turning all its treasures o'er and o'er,
By slow degrees should gain Invention's pot
And work its way to new and wondrous art.

‡ Experience and practice, devoted to one subject, often overcome both nature and art.

§ O'er all things labour triumphs in the end,
To urgent need all difficulties bend.

It is likewise said of beasts, "Quis psittaco docuit *morari*?"* Who taught the raven in a drought to throw pebbles into a hollow tree, where she espied water, that the water might rise so as she might come to it? Who taught the bee to sail through such a vast sea of air, and to find the way from a field to a flower a great way off, to her hive? Who taught the ant to bite every grain of corn that she burieth in her hill, lest it should take root and grow? Add then the word "*extundere*," which importeth the extreme difficulty, and the word "*per longum*,"† which importeth the extreme slowness, and we are what we were, even amongst the Ægyptians' gods; there being left to the faculty of reason, and nothing to the duty of art, or matter of invention.

Secondly, it is argued, the same thing is completely demonstrated by that form of induction which the old logic propounds, "and," it is added in the *Advancement of Learning*, "which seemeth familiar with Plato." This form of induction, "whereby the principles of sciences may be pretended to be invented, and so the middle proposition by derivations from the principles," is declared to be "utterly vicious and incompetent." "For," it is added, "to conclude upon an enumeration of particulars, without instance contradictory, is no conclusion, but a conjecture; for who can assure, in many subjects, upon those particulars which appear of a side, that there are not other on the contrary side which appear not?" As has been already explained, Bacon entirely mistook the nature of the old logical deduction, in which (as in every other form of syllogism) the conclusion was perfectly commensurate with the premisses, and in which the enumeration of particulars, being complete for its purpose, neither required nor could admit the introduction of contradictory instances. It is only in his own so called induction that the conclusion is of the nature of a conjecture. Exactly the reverse of what he asserts of the two is the truth: it is the Baconian Induction that concludes p

* Who taught its "good-morrow" to the parrot? Pen answers, "Hunger, the master of art and bestower of genius."

† To work out.

‡ By slow degrees.

concludit precario); the Aristotelian always necessarily (*concludit necessario*).

Third place, Bacon contends that, even if some principles may be rightly established by the in- the old logic, yet inferior axioms cannot be and safely deduced from them by the syllogism, the physical sciences. "It is true," he goes in sciences popular, as moralities, laws, and yea, and divinity, because it pleaseth God to elf to the capacity of the simplest,—that form use; and in natural philosophy likewise, by ument or satisfactory reason—*quæ assensum is effoeta est* [which wins assent, but works no of the mind]; but the subtilty of nature and will not be enchained in those bonds." So

adds in the *De Augmentis*, the syllogism ling here, nothing will serve except the true ed induction, for establishing either general or inferior propositions. Then he repeats, the same words, what we have already had quote from the *Distributio*, or Plan, of the on, about propositions consisting of words, and g but the counters or marks of popular no- ings. And he winds up the paragraph with illustration: referring to the denial by many of t philosophers of any certainty of knowledge ension, and the opinion held by them "that dge of man extended only to appearances and es," he observes, that, instead of charging upon the senses, as they were wont to do, they ave charged it upon the manner of collecting ding upon the reports of the senses: "this,"

I speak not to disable [that is, to depreciate] of man, but to stir it up to seek help; for no ie never so cunning or practised, can make a e or perfect circle by steadiness of hand, which ily done by help of a ruler or compass."

Advancement of Learning, the subject is now : these words:—"This part of Invention con- e Invention of Sciences, I purpose, if God

give me leave, hereafter to propound, having digested into two parts; whereof the one I term *Experientia Literata*, and the other *Interpretatio Naturae*, the former being but a degree and rudiment of the latter. But I will not dwell too long, nor speak too great upon a promise." In the *De Augmentis*, written, or at least published, seventeen years later, and after the *Novum Organum* had appeared, we have instead, immediately after the sentence about the ruler and compass, a statement to the following effect.—"This is that very thing which we are engaged with, and endeavouring with all possible pains to bring about, namely that the mind may by art be made equal to nature, and that there may be found some art of discovery and direction, which may disclose other arts, with their axioms and operations, and place them before our eyes." This Art of Discovery, or Indication, we are further informed, has two parts. For Discovery proceeds either from experiments to experiments, or from experiments to axioms, which may again point out new experiments. It is the former of these two kinds of Discovery or Invention that Bacon calls *Experientia Literata*, that is, Experience learnedly or scientifically conducted. the latter he calls *Interpretatio Naturae, sive Novum Organum* (the Interpretation of Nature, or New Instrument). The former, moreover, he considers to be not so much an art, properly so called, or part of philosophy, as a certain species of sagacity, whence he sometimes designates it the Chace of Philosophy (*Venatio Panis*), in allusion to the notion of that dignity being the representative of universal nature.* And he goes on, as there are three ways in which a man may walk; by groping in the dark; or by being led by another person, when he can see but imperfectly;†

* See vol. I. pp. 97—140.

† Not, however, necessarily or probably, from being "weighted" (as Wats has it), or "dim-sighted" (as it is given by Staw). The Latin is "*ipse parum videns*" (he himself seeing little) it may be from the obscurity of the place. His eyes may be as good as those of his guide; but the latter is familiar with the road, which he is not.

directing his steps for himself with the assistance of light, so may experiments be made either without any method at all, or according to a certain direction and order; or finally, in the full light of philosophy. The direction and order is what is to be understood by the *Experientia Literata*, the light must be sought from the *Novum Organum*.

The rest of the Chapter is occupied with the exemplification and illustration of this art of Scientific Experimenting; which is stated to proceed principally either by variation of the experiment; or by its production (that is, its repetition or continuation), or by its transposition or transference (from nature or accident to art, or from one art to another, or from a part of an art to a different part of the same art); or by its inversion; or by its compulsion (that is, its being carried out to the annihilation or privation of the natural virtue or power which is its purpose to test), or by its application; or by its copulation or conjunction with other experiments, or, finally, by chance experimenting (*per sortes experimenti*). As a specimen we will give what is said upon the Variation of experiments, adopting Shaw's translation, which is here sufficiently accurate:—

Experiments are varied first in the subject; as when a well-known experiment, having rested in one certain substance, is tried in another of the like kind: thus the soaking of paper is hitherto confined to linen, and not applied to silk, unless among the Chinese; nor to hair stuffs and camlets, nor to cotton and skins though these three seem to be more unfit for the purpose, and so should be tried in mixture, rather than separate. Again, engrafting is practised in fruit trees, but rarely in wild ones; yet an elm grafted upon an elm, is said to produce great foliage for shade. It is also likewise in flowers a very rare, though now the experiment begins to be made upon musk-roses; which are successfully inoculated upon common ones. We also praise the variations in the mode of the thing, among the variations in the matter. Thus we see a lemon grafted upon the trunk of a tree, thrives better than if set in earth: and why should not onion seed, set in a green onion, grow better, than when sown in the ground by itself, and so

being here substituted for the trunk, so as to make a kind of incision in the root?

An experiment may be varied in the efficient. Thus, if the sun's rays are so contracted by a burning-glass, and brought to such a degree, as to fire any combustible matter: may the rays of the moon, by the same means, be actuated to some small degree of warmth, so as to show whether all the heavenly bodies are potentially hot? and as luminous heat thus increased by glasses: may not opaque heats, as of coals and metals, before ignition, be increased likewise? or is not some proportion of light here also? amber and jet, do attract straws; whence query if they will not do the same when warmed at the fire?

An experiment may be varied in quantity; wherein great care is required, as being subject to various errors, men imagine, that upon increasing the quantity, the effect should increase proportionably: and thus they commonly conclude as a mathematical certainty, and yet it is utterly false. Suppose a leaden ball, of a pound weight, let fall from a steeple, reaches the earth in ten seconds; will a ball of two pounds, where the power of natural motion, as they call it, should be double, reaches it in five? No: they will reach almost in equal times; and not be accelerated according to quantity. Suppose a drachm of sulphur would flux half a pound of steel; will therefore an ounce of sulphur flux half a pound of steel? It is no consequence; for the stubbornness of the matter in the patient is more increased by quantity than the activity of the agent. Besides, too much, as well as too little, may frustrate the effect: thus in smelting and refining of metals, it is a common error to increase the heat of the furnace, or the quantity of the flux; but, if these exceed a certain proportion, they prejudice the operation: because by too much force and corrosiveness they turn much of the pure metal into fumes, and carry it off, whence there ensues, not only a loss in the metal, but the remaining mass becomes more sluggish and intractable. Men should therefore remember how a house-wife was deceived, who expected that by doubling her seed, her hen should lay two eggs a day, but the hen laid fat, and laid none. It is absolutely unsafe to rely upon natural experiment, before proof be made of it, both in a small and a larger quantity.

The Chapter concludes thus, as if the *Novum Organum* had been yet to be written:—"Respecting

Novum Organum we say nothing, nor do we here give any foretaste thereof; inasmuch as, seeing that it is of all the things we have taken in hand the greatest, it is our intention to make it the subject of an entire work, if the Divine favour shall permit."

The Third Chapter enters upon the subject of the Invention of Arguments; which, however, it is remarked, "is not properly an invention; for to invent is to discover that we know not, and not to recover or resummon that which we already know; and the use of this invention is no other, but, out of the knowledge whereof our mind is already possessed, to draw forth or call before us that which may be pertinent to the purpose which we take into our consideration. So as, to speak truly, it is no invention, but a remembrance or suggestion, with an application." Its parts are stated to be two; Promptuary and Topic; the latter of which is divided into General and Particular; and an example is given of Topic Particular in an enumeration of articles or heads of Inquiry on the subject of Gravity and Levity in natural philosophy.

Chapter Fourth is devoted to the Art of Judging. It is considerably altered in the *De Augmentis*. Conclusions are stated to be come to either by Induction or by Syllogism. As for the Old Induction, it is rejected as vicious; and the subject of Legitimate Induction, as it is designated, is remitted to the *Novum Organum*. The art of Judging by Syllogism, again, is declared to be nothing but the reduction of propositions to principles by middle terms; the principles being understood to be universally assented to and therefore to be exempted from question. The Art of Judgment is then divided into Analytics and the doctrine of Elenchs or Redargutions (that is, refutations). Of these last there are enumerated three species;—Elenchs of Sophisms, Elenchs of Interpretation (*Ermeniae*), and Elenchs of Images or Idols. The last only, as connected with the profoundest fallacies, are treated of at length; and a sketch is given of the doctrine of the *Idola Tribus* (Images of the Race), arising from the nature of the

general human mind; the *Idola Specus* (Images of the Den) arising from the peculiar mental character of the individual; and *Idola Fori* (Images of the Market-place), arising out of words and names, which is fully detailed in the *Novum Organum*. The *Idola Theatri* (Images of the Theatre), springing from erroneous theories and philosophies, are merely mentioned, as admitting of being objected to. The substance of all this is contained in the *Advancement of Learning*, although the different classes of *Idola* have not there the quaint names by which they are distinguished here and in the *Novum Organum*. Even in the *Advancement*, however, what is called "false appearances" in the text, are called "*idola*" in the margin.

The Fifth and last Chapter of this Fifth Book relates to the art of Preserving or Retaining Knowledge, and is nearly to the same effect in the *De Augmentis* as the *Advancement*, though somewhat extended. The art of Retention is divided into the doctrine of the Art of Memory and the doctrine of the Memory itself. Observations are made upon collections or digests of notions, upon mon-places, and upon systems of artificial memory.

The subject of the Sixth Book is what the author calls the Art of Tradition, or the Traditive Art, that by which we express or transfer our knowledge to others. The discussion is lengthened in the *De Augmentis* to about four times its extent in the *Advancement*—partly, as we shall find, by the incorporation of a tract which had been written and published some time before the last-mentioned work. It is divided into five Chapters.

In the First, the Traditive Art is distributed into three doctrines or sciences of the Organ of discourse, of the Method of discourse, and of the Illustration or Adornment of discourse. The first comprehends the doctrine of the Signs or Marks of things, and the doctrine of Grammar, which regards both speaking and writing. Notes or Marks are either naturally suitable and significant, or arbitrary. Of the former kind are hieroglyphics and pictures.

atter, what Bacon calls real characters, which he
 as being characters which express, not letters or
 , but things and notions, but yet as distinguished
 hieroglyphics by having in them nothing emble-
 al, and being in themselves altogether sard or
 resive, as much as the letters of the alphabet, the
 ing attached to them being simply the arbitrary
 nition of custom or tacit agreement. Grammar,
 ,—"whereof," he says, "the use in a mother tongue
 all, in a foreign tongue more, but most in such
 n tongues as have ceased to be vulgar tongues, and
 urned only to learned tongues,"—he divides into
 ary and Philosophical; meaning by the former the
 mar of particular languages; by the latter, the doc-
 of the analogy, not of words to one another, but
 rds to things, or to reason. Bacon's Philosophical
 mar, however, would scarcely appear to be the same
 that is now understood by Philosophical or General
 mar, which aims at investigating the rationale of
 ssions and grammatical forms by the reduction of
 diversities to certain common principles. He
 s, as far as can be gathered from his somewhat im-
 ct and unsatisfactory exposition, to have contem-
 d rather the tracing of the peculiarities of different
 ages to corresponding peculiarities of national cha-
 r. To Grammar is considered to belong every thing
 ng to the sound, the measure, and the accent of
 s, and to so much of poetry as lies in the verse.
 y under the head of writing is noticed the subject of
 ers, or secret writing; and here Bacon gives an
 nt of a cipher of his own invention; devised by
 he says, when he was a young man at Paris; and
 he adds, appearing to him worthy of being pre-
 d, seeing that it possesses the quality of the cipher
 e highest degree, namely that all things may with
 signified in all forms (*omnia per omnia*), subject
 other disadvantage except that the writing involved
 ly one-fifth of that in which it is involved—in other
 s, that the cipher is five times as cumbrous as the

In the Second Chapter, which is occupied with the doctrine of Method, there is not much added to the discussion in the *Advancement*. Method, it is commonly treated of as a part of Logic; and of Rhetoric, under the name of Disposition (comment); but it seems to deserve to be made by itself, which may be designated the Wisdomful Part, of the Traditive Art (*Prudentia*). The following passage in the *Advancement* is somewhat extended in the *De Augmentis*:—

Neither is the method or the nature of the material only to the use of knowledge, but likewise to the progression of knowledge: for since the labour and man cannot attain to perfection of knowledge, the tradition is that which inspireth the felicity of and proceeding. And therefore the most real method is of method referred to use, and method to progression: whereof the one may be termed method the other of probation.

The latter whereof seemeth to be “*via deserta et*” For, as knowledges are now delivered, there is a tract of error between the deliverer and the receiver: that delivereth knowledge desireth to deliver it in a way that may be best believed, and not as may be best expected: he that receiveth knowledge desireth rather present than expectant inquiry; and so rather not to doubt than to err: glory making the author not to lay open his error, and sloth making the disciple not to know his strength.

But knowledge that is delivered as a thread ought to be delivered and intimated, if it were by the same method wherein it was invented; and so in knowledge induced. But in this same anticipated knowledge no man knoweth how he came to knowledge which he hath obtained. But yet, nevertheless, *secundum majus et minus*,*† a man may revise

* A desert and secluded way.

† According to its being greater or less.

foundations of his knowledge and consent; and so it into another, as it grew in his own mind. For it sledge as it is in plants: if you mean to use the no matter for the roots; but if you mean to remove then it is more assured to rest upon roots than slips; every of knowledges, as it is now used, is as of fair trees without the roots—good for the carpenter, but planter. But if you will have sciences grow, it is for the shaft or body of the tree, so you look well up of the roots: of which kind of delivery the the mathematica, in that subject, hath some shadow.

enuine method, Bacon adds, he does not find really either in use, or sought after. In the ment he calls it, in a marginal note, *Methodus sive ad Filios Scientiarum* (the True Method, or the Sons of Science); in the *De Augmentis* it is intly termed the Tradition of the Lamp, or the for the Sons (*Traditio Lampadis, sive Metho- ilius*).

he observations that follow upon other diversities d, it will be sufficient to select a paragraph or ie following is nearly the same in the Latin as glish:—

diversity of method, whereof the consequence is e delivery of knowledge in aphorisms, or in methods; e may observe that it hath been too much taken into it of a few axioms or observations upon any subject a solemn and formal art, filling it with some dis- id illustrating it with examples, and digesting it into method: but the writing in aphorisms hath many virtues, whereto the writing in method doth not

t, it trieth the writer, whether he be superficial or aphorisms, except they should be ridiculous, cannot ut of the pith and heart of sciences; for discourse tion is cut off; recitals of examples are cut off; dis- connexion and order is cut off; descriptions of prac- it off; so there remaineth nothing to fill the apho- some good quantity of observation: and therefore no office, nor in reason will attempt to write aphorisms, : is sound and grounded. But in methods,

Tantum series juncturaque pollet,
Tantum de medio sumptis accedit honoris ;*

as a man shall make a great show of an art which, if it be disjointed, would come to little. Secondly, methods are fit to win consent or belief, but less fit to point to action: they carry a kind of demonstration in orb or circle, one illuminating another, and therefore satisfy; but particulars being dispersed, do best agree with dispersed directions. lastly, aphorisms, representing a knowledge broken, do move men to inquire farther; whereas methods, carrying the view of a total, do secure men, as if they were at farthest.

This last view was a favourite with Bacon. "I have heard his lordship say also," writes Rawley, in his preface to the *Sylva Sylvarum*, "that one great reason why he would not put these particulars [the facts collected in that work] into any exact method (though he looketh attentively into them shall find that they have a secret order) was because he conceived that other men would now think that they could do the like, and go on with a further collection; which, if the method had been exact, many would have despaired to attain to imitation."

The Third Chapter is devoted to the subject of Rhetoric, or the doctrine of the Illustration and Adornment of Discourse; and the additions in the *De Augmentis* extend it to nearly ten times its length in the original English treatise. The beginning, however, is nearly the same as in the *Advancement* :—

Now we descend to that part which concerneth the illustration of tradition, comprehended in that science which we call Rhetoric, or art of eloquence; a science excellent, and excellently well laboured. For although in true value it is inferior to wisdom, (as it is said by God to Moses, when he died himself for want of this faculty, "Aaron shall be thy speaker and thou shalt be to him as God,"), yet with people it is more mighty: for so Solomon saith, "Sapiens corde apparet."

* Skill and arrangement can such charms bestow
That commonplaces make a glorious show.

idens, sed dulcis eloquio majora reperiet;”* signifying soundness of wisdom will help a man to a name or on, but that it is eloquence that prevaileth in an active d so as to the labouring of it, the emulation of Aristotle rhetoricians of his time, and the experience of Cicero, de them in their works of rhetories exceed themselves. e excellency of examples of eloquence in the orations xthenes and Cicero, added to the perfection of the of eloquence, hath doubled the progression in this art; efore the deficiencies which I shall note will rather be collections, which may as handmaids attend the art, he rules or use of the art itself.

thstanding, to stir the earth a little about the roots of nce, as we have done of the rest; the duty and office oric is to apply reason to imagination for the better of the will. For we see reason is disturbed in the ration thereof by three means: by illaqueation or which pertains to logic; by imagination or impres- ich pertains to rhetoric; and by passion or affection, rtains to morality. And as, in negotiation with others, wrought by cunning, by importunity, and by vehe- so, in this negotiation within ourselves, men are und by inconsequences, solicited and importuned by ons or observations, and transported by passions. is the nature of man so unfortunately built as that wers and arts should have force to disturb reason, and tablish and advance it: for the end of logic is to teach of argument to secure reason and not to entrap it; the morality is to procure the affections to obey reason, and vade it; the end of Rhetoric is to fill the imagination, d reason, and not to oppress it: for these abuses of arts but “ex obliquo,”† for caution.

herefore it was great injustice in Plato, though spring- of a just hatred of the rhetoricians of his time, to esteem oric but as a voluptuary art, resembling it to cookery l mar wholesome meats, and help unwholesome by of sauces to the pleasure of the taste. For we see that is much more conversant in adorning that which is an in colouring that which is evil; for there is no man

e wise in heart shall be called prudent; but the sweet a shall attain greater things.
identally.

but speaketh more honestly than he can do or think: and was excellently noted by Thucydides in Cleon, that because he used to hold on the bad side in causes of estate, therefore he was ever inveighing against eloquence and good speech, knowing that no man can speak fair of courses sordid and base. And therefore, as Plato said elegantly, "That Virtue if she could be seen, would move great love and affection; so, seeing that she cannot be showed to the sense by corporal shape, the next degree is to show her to the imagination by lively representation: for to show her to reason only in subtilties of argument was a thing ever derided in Chrysippus and most of the Stoics; who thought to thrust virtue upon men by such disputations and conclusions which have no sympathy with the will of man."

Again, if the affections in themselves were pliant and obedient to reason, it were true there should be no great use of persuasions and insinuations to the will, more than of naked proposition and proofs; but in regard of the continual mutinies and seditions of the affections,

*Videō meliora, proboque;
Deteriora sequor.**

reason would become captive and servile, if eloquence of persuasions did not practise and win the imagination from the affections' part, and contract a confederacy between the reason and imagination against the affections: for the affections themselves carry ever an appetite to good, as reason doth. The difference is, that the affection beholdeth merely the present, reason beholdeth the future and sum of time. And therefore the present filling the imagination more, reason is commonly vanquished; but after that force of eloquence and persuasion hath made things future and remote appear as present, then upon the revolt of the imagination reason prevaileth.

We conclude, therefore, that Rhetoric can be no more charged with the colouring of the worst part, than logic with sophistry, or morality with vice. For we know the doctrine of contraries are the same, though the use be opposite. It appeareth also that logic differeth from Rhetoric, not only the fist from the palm, the one close, the other at large; but much more in this, that logic handleth reason exact and truth, and Rhetoric handleth it as it is planted in popular

* I see the best, and still the worst pursue.

opinions and manners. And therefore Aristotle doth wisely place Rhetoric as between logic on the one side, and moral or civil knowledge on the other, as participating of both : for the proofs and demonstrations of logic are toward all men indifferent and the same ; but the proofs and persuasions of Rhetoric ought to differ according to the auditors :—

Orpheus in sylvia, inter delphinas Arion :*

which application, in perfection of idea, ought to extend so far that, if a man should speak of the same thing to several persons, he should speak to them all respectively in several ways : though this politic part of eloquence in private speech it is easy for the greatest orators to want ; whilst, by the observing their well-graced forms of speech, they lose the volubility of application : and therefore it shall not be amiss to recommend this to better inquiry, not being curious whether we place it here or in that part which concerneth policy.

In the *Advancement* only a single example is given of each of three kinds of desiderata or deficiencies which are noticed ; in the *De Augmentis* the first and second kinds are illustrated by numerous examples. “ First,” Bacon begins (in both treatises), “ I do not find the wisdom and diligence of Aristotle well pursued, who began to make a collection of the popular signs and colours of good and evil, both simple and comparative, which are as the Sophisms of Rhetoric. . . . The defects in the labour of Aristotle are three : one, that there be but a few of many ; another that their elenchuses are not annexed and the third, that he conceived but a part of the use of them. For their use is not only in probation, but much more in impression. For many forms are equal in signification which are differing in impression ; as the difference is great in the piercing of that which is sharp and that which is flat, though the strength of the percussion be the same.” And then we have in the *De Augmentis* a translation, with additions, of the English tract published with the first and Second Editions of the *Essays* (1597 and 1598) entitled ‘ Of the Colours of Good and

* Equal to Orpheus in the listening woods,
And riding like Arion o’er the floods.

Evil, a Fragment ;' or otherwise, ' Places of Persuasion and Dissuasion.*'

This little tract, as printed in the modern edition of Bacon's works, is commonly headed by the following Letter to the Lord Mountjoy, which was first published in what is called Stephens's Second Collection (Letter to the Lord Mountjoy, in his *Memoirs, &c.*, 4to, Lond. 1734), and is curious as containing perhaps the freest expression that Bacon has anywhere ventured upon of his opinion of Aristotle :—

I send you the last part of the best book of Aristotle of Stagira, who, as your lordship knoweth, is the best author. But saying the civil respect which is due to a received estimation, the man being a Grecian and of a hasty wit, having hardly a discerning patience, and less a teaching patience, hath so delivered the matter, I am glad to do the part of a good house-woman, which, without strange mess, will sit upon pease and s' eggs. And yet perchance some that shall compare my lines with Aristotle's lines, will muse by what art, or rather by what revelation, I could disengage these conceits out of that place. But I, that should know, do freely acknowledge, that I had my light from him, where he gave me not matter to perfect, at the least he gave me occasion to invent. Wherein as I do him right, being myself a man that am as free from envying the dead in contemplation, as from envying the living in action or fortune : nevertheless still I say, and I speak it more largely than before, that in perusing the writings of this person so much celebrated, whether it were the impediment of his wit, or that he was upon glory and affection to be subtle, as one that if he had his own conceits clearly and perspicuously delivered, he would have been out of love with them himself, or else of policy, to keep himself close, as one that had been a challenger of all the world, and had raised infinite contradiction : because soever it is to be ascribed, I do not find him to do and unwrap himself well of that he seemeth to conceive to be a master of his own knowledge. Neither do I for my sake, though I have brought in a new manner of handling argument, to make it pleasant and lightsome, pretend so to overcome the nature of the subject, but that the full understanding and use of it will be somewhat dark, and best per-

* See vol. i. pp. 17, &c.

the tastes of such wits as are patient to stay the digesting and soluting unto themselves of that which is sharp and subtile. Which was the cause, joined with the love and honour I bear to your lordship, as the person I know to have many virtues, and an excellent order of them, which moved me to dedicate this writing to your lordship after the ancient manner: choosing both a friend, and one to whom I conceived the argument was agreeable.

The following introduction to the *Colours* in the original edition is omitted in the *De Augmentis*:—

In deliberatives, the point is what is good and what is evil; and of good what is greater, and of evil what is less.

So that the persuader's labour is to make things appear good or evil, and that in higher or lower degree; which as it may be performed by true and solid reasons, so it may be represented also by colours, popularities, and circumstances, which are of such force as they sway the ordinary judgment either of a weak man, or of a wise man, not fully and considerately attending and pondering the matter. Besides their power to alter the nature of the subject in appearance, and so to lead to error, they are of no less use to quicken and strengthen the opinions and persuasions which are true: for reasons plainly delivered, and always after one manner, especially with fine and fastidious minds, enter but heavily and dully; whereas, if they be varied, and have more life and vigour put into them by these forms and insinuations, they cause a stronger apprehension, and many times suddenly win the mind to a resolution. Lastly, to make a true and safe judgment, nothing can be of greater use and defence to the mind than the discovering and reprehension of these colours, showing in what cases they hold, and in what they deceive; which, as it cannot be done but out of a very universal knowledge of the nature of things, so being performed, it so cleareth man's judgment and election, as it is the less apt to slide into any error.

The original *Colours* are ten in number; in the *De Augmentis*, besides other alterations, they are arranged in a new order; and two are added.

The following stands Fifth in the *De Augmentis*, and First in the original publication:—

Since all parties or sects challenge the pre-eminence of the first place to themselves, that to which all the rest with one consent give the second place, seems to be better than th

others. For every one seems to take the first place out of itself, but to give the second where it is really due.

So Cicero went about to prove the sect of Academics, who suspended all asseveration, for to be the best. "For," saith he, "ask a Stoic which philosophy is true, he will prefer his own; then ask him which approacheth (next) the truth, he will confess the Academics. So deal with the epicure that will endure the Stoic to be in sight of him: so soon as he hath placed himself he will place the Academics next him."

So if a prince took divers competitors to a place, and examined them severally whom next themselves they would recommend, it were like the ablest man should have the second voices.

The fallax of this colour happeneth oft in respect of error for men are accustomed, after themselves, and their fashion, to incline unto them which are a step and are least their way, in despite and derogation of them that hold the hardest to it. So that this colour of inferiority and pre-eminence is a sign of enervation and weakness.

Here is the Seventh of the *De Augmentis*, and Fourth of the original edition:—

That which keeps a matter safe and entire is good: but that which is destitute and unprovided of a retreat is bad. For, whereas the ability of acting is good, not to be able to withdraw one's self is a kind of impotency.

Hereof Æsop framed the fable of the two frogs that consulted together in the time of drought (when many plashees that they had repared to were dry) what was to be done, and the first propounded to go down into a deep well, because it was like water would not fail there; but the other answered, "Yes, if it do fail, how shall we get up again?" And the reason that human actions are so uncertain and subject to peril, that seemeth the best course which hath most passages out of it. Appertaining to this persuasion the forms are, you shall enjoy yourself; on the other side, "tantum, quantum voles, sume fortuna;" i. e. take what lot you will; or, you shall keep the matter on your own hand. The reprehension of it is, proceeding and resolving in all actions is necessary. For he saith well, not to resolve is to resolve, and many times breeds as many necessities, and engageth as far in some sort as to resolve. So it is but the covetous man's disease to be tied in power; for the covetous man will enjoy nothing

cause he will have his full store and possibility to enjoy the more; so, by this reason, a man should execute nothing, because he should be still indifferent and at liberty to execute any thing. Besides necessity, and this same "jacta est alea," or once having cast the dice, hath many times an advantage, because it awaketh the powers of the mind and strengtheneth endeavour, "ceteris paria, necessitate certe superiores istis," (which are able to deal with any others, but master these upon necessity).

The following is the Eighth in both publications :—

That which a man hath procured by his own default is a greater mischief (or evil); that which is laid on him by others is a lesser evil.

The reason is, because the sting and remorse of the mind accusing itself doubleth all adversity; contrariwise, the considering and recording inwardly that a man is clear and free from fault, and just imputation doth attemper outward calamities. For if the will be in the sense and in the conscience both, there is a germination of it; but if evil be in the one and comfort in the other, it is a kind of compensation. So the poets in tragedies do make the most passionate lamentation, and those that forerun final despair, to be accusing, questioning, and torturing of a man's self.

Seque unam clamat causamque caputque malorum :

She railing doth confess herself to be

The cause and source of her own misery.

And contrariwise the extremities of worthy persons have been annihilated in the consideration of their own good deserving. Besides, when the evil cometh from without, there is left a kind of evaporation of grief if it come by human injury, either by indignation and meditating of revenge from ourselves, or by expecting or fore-conceiving that Nemesis and retribution will take hold of the authors of our hurt; or if it be by fortune or accident, yet there is left a kind of expostulation against the divine powers :—

Atque Deos atque astra vocat crudelia mater :

The Gods and cruel stars the mother chargeth.

But where the evil is derived from a man's own fault, there all strikes deadly inwards and suffocateth.

The reprehension of this colour is :—

First, in respect of hope; for reformation of our fault is

extra potestate, our own power; but amendment of our fortune simply is not. Therefore Demosthenes in many of his orations said thus to the people of Athens:—"That which having regard to the time past is the worse point and circumstance of the rest; that as to the time to come is the best. What is the even this, that by your sloth, irresolution, and misgoverning your affairs are grown to this declination and decay. If had you used and ordered your means and forces to the best and done your parts every way to the full, and, notwithstanding your matters should have gone backward in this manner as they do, there had been no hope left of recovery or reputation. But since it hath been only by your own errors, &c." So Epictetus in his lectures saith, "The worst state of man is to excuse evil things, better than that to accuse any man's self, and best of all to accuse neither."

Another reprehension of this colour is in respect of the weak bearing of evils, wherewith a man can charge no body but himself, which maketh them the less:—

————— *Leve fit, quod bene fertur onus:*

That burden's light, that's on discreetly laid.

And therefore many natures that are either extremely proud and will take no fault to themselves, or else very true and cleaving to themselves (when they see the blame of anything that falls out ill must light upon themselves), have no other shift but to bear it out well, and to make the least of it; for, as we see, when sometimes a fault is committed, and before it be known who is to blame, much ado is made of it, but after, if it appear to be done by a son, or by a wife, or by a near friend, then it is light made of it. so much more when a man must take it upon himself. And therefore it is commonly seen that women which marry husbands of their own choosing, against their friends' consents, if they be never so ill-used yet yet shall seldom see them complain, but set a good face on it.

In the *De Augmentis* Bacon adds, that he has a great number more of such Colours, which he had collected in his youth, but without their illustrations and *elenchi*, or refutations; which at the present time he has no leisure to draw up. He thinks it best, therefore, not to produce them in their unclothed condition.

The collection of Colours, or Sophisms, as they are called in the *De Augmentis*, is followed by a second

lection of what are called *Antitheta Rerum* (antithetical statements of things), which is described as pertaining to the promptuary part of Rhetoric. "Our meaning is," says Bacon (to quote Shaw's translation), "that all the places of common use, whether for proof, confutation, persuasion, dissuasion, praise, or dispraise, should be ready studied, and either exaggerated or degraded with the utmost effort of genius, or, as it were, perverse resolution, beyond all measure of truth. And the best way of forming this collection, both for conciseness and use, we judge to be that of contracting and winding up these places into certain acute and short sentences, as into so many clues, which may occasionally be wound off into larger discourses." "Brief and acute sentences," is Bacon's own description in the *Advancement*, "not to be cited, but to be as skeins or bottoms of thread, to be unwinded at large when they come to be used; supplying authorities and examples by reference."

There are forty-seven of these *Antitheta* in all. In the following specimens Shaw's translation is adopted:—

NOBILITY.

For.

Where virtue is deeply implanted from the stock, there can be no vice.

Nobility is a laurel conferred by time.

If we reverence antiquity in dead monuments; we should do it much more in living ones.

If we despise nobility in families, what difference is there betwixt men and brutes?

Nobility shelters virtue from envy, and recommends it to favour.

Against.

Nobility seldom springs from virtue; and virtue seldom from nobility.

Nobles oftener plead their ancestors for pardon than promotion.

New rising men are so industrious, as to make nobles see like statues.

Nobles, like bad racers, look back too often in the course.

SUPERSTITION

For.

They who err out of zeal, though they are not to be approved, should yet be pitied.

Mediocrity belongs to morality, extremes to divinity.

A superstitious man is a religious formalist.

I should sooner believe all the fables and absurdities of a religion, than that the universal frame is without a deity.

Against.

As an ape appears the more deformed for his resemblance to man, so the similitude of superstition to religion makes it the more odious.

What affectation is in civil matters, such is superstition in divine.

It were better to have no belief of a God, than such an one dishonours him.

It was not the school of Epicurus, but the Stoics, that disturbed the states of old.

The real atheists are hypocrites, who deal continually in holy things without feeling.

TEMPERANCE.

For.

To abstain and sustain are nearly the same virtue.

Uniformity, concord, and the measure of motions, are the celestial, and the characters of eternity.

Temperance, like wholesome cold, collects and strengthens the force of the mind.

When the senses are too exquisite and wandering, they are narcotics; so likewise do wandering affections.

Against.

I like not bare negative virtues, they argue innocence, not merit.

The mind languishes, that is not sometimes spirited up to excess.

I like the virtues, which produce the vivacity of action, not the dullness of passion.

The sayings, "Not to use, that you may not desire;" "Not to desire, that you may not fear," &c., proceed from pusillanimous and distrustful natures.

LEARNING.

For.

To write books upon minute particulars, were to render experience almost useless.

Reading is conversing with the wise ; but acting is generally conversing with fools.

Sciences, of little significance in themselves, may sharpen the wit, and marshal the thoughts.

Against.

Men in universities are taught to believe.

What art ever taught the seasonable use of art ?

To be wise by precept, and wise by experience, are contrary habits ; the one sorts not with the other.

A vain use is made of art, lest it should otherwise be unemployed.

It is the way of scholars to show all they know ; and oppose further information.

CEREMONIES.

For.

A graceful deportment is the true ornament of virtue.

If we follow the vulgar in the use of words, why not in habit and gesture ?

He who observes not decorum in smaller matters, may be a great man, but is unwise at times.

Virtue and wisdom, without all respect and ceremony, are like foreign languages, unintelligible to the vulgar.

He who knows not the sense of the people, neither by congruity nor observation, is senseless.

Ceremonies are the translation of virtue into our own language.

Against.

What can be more disagreeable than in common life to copy the stage ?

Ingenuous behaviour procures esteem ; but affectation and cunning, hatred.

Better a painted face and curled hair, than a painted and curled behaviour.

He is incapable of great matters, who breaks his mind trifling observations.

Affectation is the glossy corruption of ingenuity.

INNOVATION.

For.

Every remedy is an innovation.

He who will not apply new remedies, must expect new diseases.

Time is the greatest innovator; and why may we not imitate time?

Ancient precedents are unsuitable, and late ones corrupt and degenerate.

Let the ignorant square their actions by example.

As they who first derive honour to their family, are commonly more worthy than those who succeed them, so innovations generally excel imitations.

An obstinate adherence to customs is as turbulent a thing as innovation.

Since things of their own course change for the worse, if they are not by prudence altered for the better, what end can this be of the ill?

The slaves of custom are the sport of time.

Against.

New births are deformed things.

No author is accepted till time has authorized him.

All novelty is injury, for it defaces the present state of things.

Things authorized by custom, if not excellent, are yet comfortable, and sort well together.

What innovator follows the example of time, which insinuates new things so quietly as to be almost imperceptible?

Things that happen unexpected, are less agreeable to those they benefit, and more afflicting to those they injure.

"The examples of Antithets here laid down," says Bacon, "may not perhaps deserve the place assigned them; but, as they were collected in my youth, and are really seeds, not flowers, I was unwilling they should be lost. In this they plainly show a juvenile warmth, though they abound in the moral and demonstrative kind, but touch sparingly upon the deliberative and judicial. Many of the thoughts thus early stored up by him are inserted in the same, or nearly in the same, form in his *Essays* and other writings, we may perceive how other like seeds, as he calls them, had germinated in his mind. In the *Advancement* he compares the collection to "

p of pieces unmade up," and another collection of what he calls *Formulae* to "a shop of things ready made." "Formulae," it is added, "are but decent and passages or conveyances of speech, which may serve differently for differing subjects; as of preface, conclusion, digression, transition, excusation, &c. For, as in buildings there is great pleasure and use in the well-fitting of the staircases, entries, doors, windows, and the like; so in speech the conveyances and passages are special ornament and effect." Only one example of a formula is subjoined, under the title of *A conclusion a deliberative*:—"So may we redeem the faults past, and prevent the inconveniences future." Two or three more examples are added in the Latin treatise.

Chapter Four is occupied with the consideration of two appendices of the Traditive Art; the one Critical, the other Pedagogic or Pedantical. The Critical is concerned with the right editing, expounding, and judging books; the Pedagogic with the right method of reading and studying books. In the *De Augmentis*, under the head of Pedagogic, we are told at setting out that the shortest precept that could be given would be, Constitute the schools of the Jesuits; for nothing better hath ever come into use. A public and collegiate education of youth is also emphatically recommended, in preference to either a domestic one or one under private tutors. With regard to the manner and order of teaching, also, youth are especially warned to beware of commands, and of that precocity of learning, which begets only intellectual confidence, and produces rather the show than the substance of great proficiency. What laws may be given as it stands in the *Advancement*, in which the Latin is translated with little alteration:—

For pedantical knowledge, it containeth that difference of education which is proper for youth; whereunto appertain divers considerations of great fruit.

As first, the timing and seasoning of knowledges; as with what to initiate them, and from what for a time to refrain from.

Secondly, the consideration where to begin with the easy and so proceed to the more difficult ; and in what course press the more difficult, and then to turn them to the easy . for it is one method to practise swimming with blades and another to practise dancing with heavy shoes.

A third is, the application of learning according unto propriety of the wits, for there is no defect in the faculties intellectual but seemeth to have a proper cure contained in studies ; as for example, if a child be hard-witted, that hath not the faculty of attention, the mathematics give remedy thereunto ; for in them, if the wit be caught away a moment, one is to begin anew. And as sciences have propriety towards faculties for cure and help, so faculties powers have a sympathy towards sciences for excellency speedily profiting ; and therefore it is an inquiry of great wisdom what kinds of wits and natures are most proper for sciences.

Fourthly, the ordering of exercises is matter of great consequence to hurt or help : for, as is well observed by Cicero men in exercising their faculties, if they be not well advised do exercise their faults and get ill habits as well as good ; there is a great judgment to be had in the continuance and termination of exercises. It were too long to particularise number of other considerations of this nature, things but mean appearance, but of singular efficacy. For as the watering or cherishing of seeds or young plants is that that is most important to their thriving (and as it was noted that the first kings being in truth as tutors of the state of Rome in the fancy thereof, was the principal cause of the immense greatness of that state which followed,) so the culture and manuring minds in youth hath such a forcible, though unseen operation, as hardly any length of time or contention of labour can countervail it afterwards. And it is not amiss to observe also how small and mean faculties gotten by education, when they fall into great men or great matters, do work great and important effects, whereof we see a notable example Tacitus of two stage-players, Percennius and Vibulenus, by their facility of playing put the Pannonian armies into extreme tumult and combustion : for, there arising a mutiny amongst them upon the death of Augustus Cæsar, Blæsus lieutenant had committed some of the mutineers, which he suddenly rescued ; whereupon Vibulenus got to be brought to speak, which he did in this manner : "These poor innocent wretches, appointed to cruel death, you have restored to be

it; but who shall restore my brother to me, or life unto
 other, that was sent hither in message from the legions
 many, to treat of the common cause? and he bathed
 him this last night by some of his fencers and
 that he hath about him for his executioners upon
 him. Answer, Blæsus, what is done with his body? The
 best enemies do not deny burial. When I have per-
 formed my last duties to the corpse with kisses, with tears,
 and me to be slain beside him; so that these my fellows
 of good meaning and our true hearts to the legions, may
 have to bury us." With which speech he put the army
 in infinite fury and uproar: whereas truth was he had no
 ; neither was there any such matter; but he played it
 as if he had been upon the stage.

With these first six Books finishes the portion of the
augmentis relating to the logical sciences, or to
 is properly to be called the Baconian system of
 metaphysics. For the remainder of the work a more
 full account will suffice.

The Seventh Book is nearly the same in the Latin as
 the original English. It consists of three Chapters;
 makes a survey of Ethics as divided into the doctrine
 of the Exemplar or Platform (that is, the essential
) of the Good, and the doctrine of the Cultivation
 Practice of the Good, called by Bacon, after his
 father, the Georgics of the Mind. The Good, in its
 natural nature, is divided into Good Simple and Good
 mixed; or the Good in its Kinds and in its Degrees.
 Good Simple, again, is either Private and Particular, or
 common. Individual Good is divided into Active
 and Passive Good; and Passive Good is further subdivided
 into Conservative and Perfective. Good of Com-
 mon, or that which has a reference to others, regards
 common duties, or duties respective or special.
 The doctrine of the Practice of the Good is made to
 include the doctrines of the General Dispositions or
 characteristic Qualities of Minds; of their Affections and
 passions; and of the Remedies suited for all mental
 disorders and errors. Finally, as an Appendix to this last

doctrine comes that of the agreement between Good
the Mind and Good of the Body

We subjoin one or two of the more remarkable
sages as they stand in the *Advancement* —

To resume the good of conservation or comfort, which
sisteth in the fruition of that which is agreeable to our nature,
it seemeth to be the most pure and natural of pleasures,
yet the softest and the lowest. And this also receiveth a
ference, which hath neither been well judged of, nor
inquired, for the good of fruition or contentment is ph
either in the sincereness of the fruition, or in the quickness
vigour of it: the one superinduced by the equality, the
by vicissitude; the one having less mixture of evil, the
more impression of good. Whether of these is the greater
is a question controverted; but whether man's nature may
be capable of both, is a question not inquired.

The former question being debated between Socrates
sophist, Socrates placing felicity in an equal and con
peace of mind, and the sophist in much desiring and re
enjoying, they fell from argument to ill words: the sop
saying that Socrates's felicity was the felicity of a block
stone; and Socrates saying that the sophist's felicity was
felicity of one that had the itch, who did nothing but itch
scratch. And both these opinions do not want their support
for the opinion of Socrates is much upheld by the general
sent even of the Epicures themselves, that virtue beareth
great part in felicity; and if so, certain it is, that virtue
more use in clearing perturbations than in compassing des
The sophist's opinion is much favoured by the assertion
last spake of, that good of advancement is greater than good
simple preservation; because every obtaining a desire hath
show of advancement, as motion, though in a circle, hath a
of progression.

But the second question, decided the true way, maketh
former superfluous. For can it be doubted, but that there
some who take more pleasure in enjoying pleasures than
other, and yet nevertheless are less troubled with the loss
leaving of them? so as this same, "Non uti ut non app
non appetere ut non metuas, sunt animi pusilli et diffident

* Not to use without desire, not to desire without
the marks of a weak and distrusting mind.

And it seemeth to me, that most of the doctrines of the philosophers are more fearful and cautionary than the nature of things requireth. So have they increased the fear of death in offering to cure it: for when they would have a man's whole life to be but a discipline or preparation to die, they must needs make men think that it is a terrible enemy, against whom there is no end of preparing. Better, saith the poet:

Qui finem vitæ extremum inter munera ponat
Naturæ.*

So have they sought to make men's minds too uniform and harmonical, by not breaking them sufficiently to contrary notions: the reason whereof I suppose to be, because they themselves were men dedicated to a private, free, and unapplied course of life. For as we see, upon the lute or like instrument, a ground, though it be sweet and have show of many changes, yet breaketh not the hand to such strange and hard stops and passages, as a set song or voluntary; much after the same manner was the diversity between a philosophical and a civil life. And therefore men are to imitate the wisdom of jewellers; who, if there be a grain, or a cloud, or an ice which may be ground forth without taking too much of the stone, they help it; but if it should lessen and abate the stone so much, they will not meddle with it: so ought men so to procure serenity as they destroy not magnanimity.

The following is from the latter part of the Book:—

The opinion of Aristotle seemeth to me a negligent opinion, that of those things which consist by nature, nothing can be changed by custom; using for example, that if a stone be thrown ten thousand times up, it will not learn to ascend; and that by often seeing or hearing, we do not learn to see or hear the better. For though this principle be true in things wherein nature is peremptory, (the reason whereof we cannot now stand to discuss,) yet it is otherwise in things wherein nature admitteth a latitude. For he might see that a strait glove will come more easily on with use; and that a wand will by use bend otherwise than it grew; and that by use of the voice we speak louder and stronger; and that by use of enduring heat or cold, we endure it the better, and the like:

* *Who looks on death as Nature's latest gift.*

which latter sort have a nearer resemblance unto of manners he handleth, than those instances which. But allowing his conclusion, that virtues and vice habit, he ought so much the more to have taught of superinducing that habit: for there be many pr wise ordering the exercises of the mind, as there is the exercises of the body, whereof we will recite a

The first shall be, that we beware we take ne either too high a strain, or too weak. For if too hi fident nature you discourage; in a confident natur an opinion of facility, and so a sloth; and in all breed a further expectation than can hold out, a satisfaction on the end. If too weak, of the other si not look to perform and overcome any great task.

Another precept is, to practise all things ch several times, the one when the mind is best dispos when it is worst disposed; that by the ore you a great step, by the other you may work out th stonds of the mind, and make the middle times th and pleasant.

Another precept is, that which Aristotle mentio way, which is to bear ever towards the contrary ext whereunto we are by nature inclined; like unto against the stream, or making a wand straight by t contrary to his natural crookedness.

Another precept is, that the mind is brought better, and with more sweetness and happiness, if unto you pretend be not first in the intention, but aliud agendo,* because of the natural hatred c against necessity and constraint. Many other a are touching the managing of exercise and cu being so conducted, doth prove indeed another being governed by chance, doth commonly prove of nature, and bringeth forth that which is lame terfeit.

Wherefore we will conclude with that last point all other means the most compendious and su again, the most noble and effectual to the reducing unto virtue and good estate; which is the electi pounding unto a man's self good and virtuous end

* As if intent on business with which we had

such as may be in a reasonable sort within his compass to attain. For if these two things be supposed, that a man set before him honest and good ends, and again, that he be resolute, constant, and true unto them; it will follow that he shall mould himself into all virtue at once. And this indeed is like the works of nature, whereas the other course is like the work of the hand. For as when a carver makes an image, he shapes only that part whereupon he worketh (as if he be upon the face, that part which shall be the body is but a rude stone still, till such time as he comes to it); but, contrariwise, when nature makes a lower or living creature, she formeth rudiments of all the parts at one time: so in obtaining virtue by habit, while a man practiseth temperance, he doth not profit much to fortitude nor the like; but when he dedicateth and applieth himself to good ends, look, what virtue soever the pursuit and passage towards those ends doth commend unto him, he is invested of a precellent disposition to conform himself thereunto. Which state of mind Aristotle doth excellently express himself, that it ought not to be called virtuous, but divine: his words are these—*Immanitati autem consentaneum est opponere eam, quæ supra humanitatem est, heroicam sive divinam virtutem;** and a little after, *Nam ut feræ neque vitium neque virtus est, nec neque Dei: sed hic quidem status altius quiddam virtutis est, ille aliud quiddam a vitio.*† And therefore we may see that celsitude of honour Plinius Secundus attributeth to Trajan in his funeral oration, where he said, “That men needed make no other prayers to the gods, but that they would continue as good lords to them as Trajan had been;” as if he had not been only an imitation of divine nature, but a pattern of it. But these be heathen and profane passages, having but a shadow of that divine state of mind which religion and the holy scriptures do conduct men unto by imprinting upon their souls charity, which is excellently called the bond of perfection, because it comprehendeth and fasteneth all virtues together. And it is elegantly said by Menander of vain love, which is but

* It is the characteristic of a ferocious disposition to oppose that heroic or rather divine virtue which transcends humanity.

† As beasts cannot be said to have vice or virtue, so neither can the gods; for as the condition of the latter is something more exalted than virtue, so that of the former is something different from vice.

a false imitation of divine love—"Amor melior sophista et humanam vitam,"* that love teacheth a man to carry himself better than the sophist or preceptor, which he calleth himself, because, with all his rules and precepts, he cannot form a man so dexterously, nor with that facility to prize himself and govern himself as love can do; so certainly, if a man's mind be truly inflamed with charity, it doth work him suddenly into greater perfection than all the doctrine of men can do, which is but a sophist in comparison of the other. Further, as Xenophon observed truly, that all other affects though they raise the mind, yet they do it by distorting the uncomeliness of extacies or excesses; but only love doth calm the mind, and nevertheless at the same instant doth raise and compose it: so in all other excellencies, though they advance nature, yet they are subject to excess; only charity admitteth no excess. For so we see, by aspiring to be like God in power, the angels transgressed and fell—"Ascendam, et similia altissimi"† by aspiring to be like God in knowledge, man transgressed and fell—"Eritis sicut Dii, scientes bonum et malum:"‡ But by aspiring to a similitude of God in goodness or love, neither man nor angel ever transgressed, or do transgress. For unto that imitation we are called—"Dilectum inquit eos vestros, benefacite eis qui oderunt vos, et orate prosequentibus et calumniantibus vos, ut sitis filii Patris qui in cœlis est, qui solem suum oriri facit super bonos et malos, et pluit super justos et injustos."§ So in the first form of the divine nature itself, the heathen religion speakes thus, "Optimus Maximus;"|| and the sacred Scriptures say "Misericordia ejus super omnia opera ejus"¶

Wherefore I do conclude this part of moral knowledge, concerning the culture and regimen of the mind; wherein if a man, considering the parts thereof which I have enumerated

* Love is better than any tutor as a guide to human life.

† I will mount and be like unto the Most High.

‡ Ye shall be like gods, knowing good and evil.

§ Love your enemies, do good to them who hate you, pray for them who despitefully use you and persecute you, that you may be the children of your Father in heaven, who maketh his sun to rise upon the evil and the good, and sendeth his rain upon the just and upon the unjust.

|| Best and greatest.

¶ His tender mercy is over all his works.

judge that my labour is but to collect into an art or science which hath been pretermitted by others, as matters of common sense and experience, he judgeth well. But as Pindocrates said with Demosthenes—"You may not marvel, Athenians, that Demosthenes and I do differ; for he drinketh water, and I drink wine, and like as we read of an ancient parable of the two gates of sleep—

Sunt geminæ ac mni portæ; quarum altera fertur
Corymbæa, qua veris facilis datur exitus umbris;
Alterâ canit lentæ perfectæ nitens elephanto,
Sed falsa ad eulæm mittunt nesciuta manes."

If we put on sobriety and attention, we shall find it a sure axiom in knowledge, that the more pleasant liquor of wine is more vaporous, and the braver gate of ivory sendeth forth a falser dream.

The subject of the Eighth Book is Civil Knowledge, the Ethics of Statesmanship, "a subject," says Bacon, "which of all others (we must understand him to mean, political science) is most immersed in matter, and hardest reduced to axiom." The Book is about three times the length of the corresponding portion of the *Advancement*, and it is much the longest of the nine books of the *De Augmentis*. It is divided into three Chapters; the principal additions consisting of illustrative examples inserted in the second and third. Civil Knowledge is distributed into the doctrine of Conversation, the doctrine of Negotiation or Business, and the doctrine of Government; the First Chapter contains a few observations on the first; the two remaining Chapters are devoted respectively to the second and third.

The passage on Conversation in the *Advancement* is as follows; it is slightly extended in the Latin:—

The wisdom of conversation ought not to be overmuch affected, but much less despised; for it hath not only an honour

Thus rendered by Dryden:—

Two gates the silent house of sleep adorn,
Of polished ivory this, that of transparent horn;
True visions through transparent horn arise,
Through polished ivory pass deluding lies.

in itself, but an influence also into business and government. The poet saith—

Nec vultu destrue verba tuo :*

a man may destroy the force of his words with his countenance, so may he of his deeds, saith Cicero, recommending to him, rather affability and easy access. "Nil interest habere os apertum, vultum clausum;"† it is nothing won to admit with an open door, and to receive them with a shut and reserved countenance. So, we see, Atticus, before the first interview between Caesar and Cicero, the war depending, seriously advise Cicero touching the composing all order of his countenance and gesture. And if the government of countenance be of such effect, much more is that of the speech and other carriage appertaining to conversation; the model whereof seemeth to me well expressed by Livy though not meant for this purpose—"Ne aut arrogans videar, aut noxius; quorum alterum est alienæ libertatis oblitus, alter sum;"‡ the sum of behaviour is to retain a man's own dignity without intruding upon the liberty of others. On the other side, if behaviour and outward carriage be intended too much, first it may pass into affectation, and then "quid deforis quam scenam in vitam transferre"§ to act a man's life? although it proceed not to that extreme, yet it consumeth and employeth the mind too much. And therefore as we will advise young students from company keeping, by saying "Amici fures temporis, || so certainly the intending of discretion of behaviour is a great thief of meditation. As such as are accomplished in that form of urbanity please themselves in it, and seldom aspire to higher virtue, whereas those that have defect in it do seek comeliness by reputation; where reputation is, almost everything becometh; but where that is not, it must be supplied by punctos and compliments. Again, there is no greater impediment of action than an

* Let not harsh looks your soothing words belie.

† It is not enough to keep your door open, if your look be reserved.

‡ Lest I should seem arrogant or subservient; the fear of which argues forgetfulness of the freedom of others, the freedom of our own.

§ What is worse than to transfer the stage to real life?

|| Friends are thieves of time.

observance of decency, and the guide of decency, which and season. For as Solomon saith, "Qui respicit ad non seminat; et qui respicit ad nubes, non metit:"* must make his opportunity, as oft as find it. To con-behaviour seemeth to me as a garment of the mind, and the conditions of a garment. For it ought to be made ion; it ought not to be too curious; it ought to be so as to set forth any good making of the mind, and y deformity; and above all, it ought not to be too restrained for exercise or motion.

following short paragraph from the beginning Second Chapter is nearly the same in both as :—

wisdom touching Negotiation or Business hath not been collected into writing, to the great derogation of learned the professors of learning. For from this root springeth that note or opinion, which by us is expressed in adage effect—"that there is no great concurrence between g and wisdom." For of the three wisdoms which we it down to pertain to civil life, for wisdom of behaviour, learned men for the most part despised, as an inferior ie, and an enemy to meditation; for wisdom of govern-hey acquit themselves well when they are called to it, but ppeneth to few; but for the wisdom of business, wherein life is most conversant, there be no books of it, except ew scattered advertisements, that have no proportion to gnitude of this subject. For if books were written of the other, I doubt not but learned men with mean ex-e, would far excel men of long experience without learn-d outshoot them in their own bow.

er this we have a collection of aphorisms gathered he Parables (or Proverbs) of Solomon, accompanied short explanations or commentaries, by way of iles of what is called the Doctrine or Knowledge attered Occasions (*Doctrina de Sparsis Occasi-*), which is made the First Part of the Doctrine of ess; the Knowledge of Rising in the World (*Am-*

e that observeth the wind shall not sow; and he that eth the clouds shall not reap.

bitus Vitae) being the Second. The number of aphorisms, which was twenty-four in the *Advancement of Learning*, is increased to thirty-four in the *De Mentis*; two, besides, are omitted, so that the number of the new aphorisms is twelve, and the explanations which are in general strikingly ingenious, are also for the most part much extended. Adopting Shaw's Edition (though not very good), we will give first a few of those to be found, though in a shorter form, in the *Advancement*.

A soft answer turneth away wrath. If the anger of a prince, or superior, be kindled against you; and it be your turn to speak; Solomon directs; 1. that an answer be made; and 2. that it be soft. The first rule contains three precepts; viz. 1. to guard against a melancholy or stubborn silence; for this either turns the fault wholly upon you, as if you could make no answer; or secretly imports your superior, as if his ears were not open to a just defence. 2. To beware of delaying the thing; and requiring a long day for your defence: which either accuses your superior of passion; or signifies that you are preparing some artificial defence or colour. So that it is always best directly to say something for the present, in your own excuse, as the occasion requires. And 3. to make a real answer; an answer not a mere confession or bare submission; but a mixture of apology and excuse, if it is unable to do otherwise, unless with very generous and noble spirits, which are extremely rare. Then follows the second rule: that the answer be mild and soft, not still irritating.

A wise man contending with a fool, whether he gets the victory or smiles, will not find rest.—We are frequently admonished to avoid unequal conflicts, that is, not to strive with the strong. But the admonition of Solomon is no less useful; that we should not strive with the worthless, for here the match is unequal; where it is no victory to conquer, and a great dishonour to be conquered. Nor does it signify if, in such a contest, we should sometimes deal as in jest; and sometimes in the most disdainful contempt. For what course soever we take, we are losers, and can never come handsomely off. But the worst of all is, if our antagonist have something of the fool in him; that is, if he be confident and headstrong.

The end of a speech is better than the beginning.

rhorism corrects a common error, prevailing not only among such as principally study words, but also the more prudent; and, that men are more solicitous about the beginnings and entrances of their discourses, than about the conclusions; and more exactly labour their prefaces and introductions than their closes. Whereas they ought not to neglect the former; but should have the latter, as being things of far greater consequence, ready prepared beforehand: casting about with themselves, as much as possible, what may be the last issue of the discourse; and how business may be thence forwarded and opened. They ought further, not only to consider the windings up of discourses relating to business; but to regard also such turns as may be advantageously and gracefully given upon departure; even though they should be quite foreign to the matter in hand. It was the constant practice of two great and prudent privy-counsellors, on whom the weight of the kingdom chiefly rested, as often as they discoursed with their princes upon matters of state, never to end the conversation with what regarded the principal subject; but always to go off with a jest, or some pleasant device; and, as the proverb runs, "Washing off their salt-water discourses with fresh, at the conclusion." And this was one of the principal arts they had.

Have you seen a man quick at his work? He shall stand before kings, and shall not be neglected.—Of all the virtues which kings chiefly regard and require, in the choice of servants, that of expedition and resolution, in the dispatch of business, is the most acceptable. Men of depth are held suspected by princes; as inspecting them too close; and being able, by their strength of capacity, as by a machine, to turn and wind them against their will, and without their knowledge. Popular men are hated; as standing in the light of kings; and drawing the eyes of the multitude upon themselves. Men of courage are generally esteemed turbulent, and too enterprising. Honest and just men are accounted morose: and not pliable enough to the will of their masters. Lastly, there is no virtue but has its shade, wherewith the minds of men are offended; but dispatch alone in executing their commands has nothing displeasing to them. Besides, the motions of the minds of kings are swift, and impatient of delay: for they think themselves able to effect anything, and imagine that nothing more is wanting but to have it done instantly. Whence dispatch is to them the *most* grateful of all things.

The following are from those added in the *mentis* :—

As dead flies cause the best ointment to send odour, so doth a little folly him that is in reputation of wisdom and honour.—The condition of men eminent is, as this aphorism excellently observes, exceeding miserable; because their errors, though ever so small, are overlooked. But, as in a clear diamond every little speck, strikes the eye disagreeably, though it would be observed in a duller stone; so in men of eminent wisdom, the smallest vices are readily spied, talked of, and secured, whilst in an ordinary man, they would be almost concealed, or been easily excused. Whence arises in a very wise man; a small slip in a very good man; a little indecency in a polite and elegant man, greatly diminishes their characters and reputations. It might, therefore, be a policy, for men of uncommon excellences, to intermix in their actions a few absurdities, that may be committed in vice, in order to reserve a liberty, and confound the view of little defects.

A prudent man looks well to his steps; but a fool to deceit.—There are two kinds of prudence, the one sound—the other degenerate and false: the latter Sold by the name of folly. The candidate for the former has his footings, looking out for dangers, contriving remedies, the assistance of good men, defending himself against all is wary in entering upon business, and not unprovided against all, watchful for opportunities, powerful against opposition. But the follower of the other is wholly patched up with cunning; placing all his hope in the cunning of others, and forming them to his fancy. And this is justly rejected as a vicious, and even a weak kind of prudence. For 1. it is by no means a thing in our own power; nor upon any constant rule. But is daily inventing of new means as the old ones fail and grow useless. 2. He who has the character of a crafty, tricking man, is entirely disreputable, the principal instrument of business, trust; whence he can do nothing succeed to his wish. 3. Lastly, however agreeable these arts may seem, yet they are often far from well observed by Tacitus, when he said, that crafty men *counsels, though pleasant in the expectation, fail to execute, and unhappy in the event.*

He has stayed the longer, Bacon adds, upon these politic sentences of Solomon, from his desire to give authority to this part of knowledge by so excellent a precedent ; and then he proceeds :—

Neither was this in use only with the Hebrews, but it is generally to be found in the wisdom of the more ancient times ; that as men found out any observation that they thought was good for life, they would gather it, and express it in parable, or aphorism, or fable. But for fables, they were vicegerents and supplies where examples failed : now that the times abound with history, the aim is better when the mark is alive. And therefore the form of writing which of all others is fittest for this variable argument of negotiation and occasion is that which Machiavel chose wisely and aptly for government ; namely, discourse upon histories or examples : for knowledge drawn freshly, and in our view, out of particulars knoweth the way best to particulars again ; and it hath much greater life for practice when the discourse attendeth upon the example, than when the example attendeth upon the discourse. For this is no point of order, as it seemeth at first, but of substance : for when the example is the ground, being set down in a history at large, it is set down with all circumstances, which may sometimes control the discourse thereupon made, and sometimes supply it as a very pattern for action ; whereas the examples alleged for the discourse's sake are cited succinctly, and without particularity, and carry a servile aspect toward the discourse which they are brought in to make good.

But this difference is not amiss to be remembered, that as history of times is the best ground for discourse of government, such as Machiavel handleth, so history of lives is the most proper for discourse of business, because it is most conversant in private actions. Nay, there is a ground of discourse for this purpose fitter than them both, which is discourse upon letters such as are wise and weighty, as many are of Cicero ad Atticum, and others. For letters have a great and more particular representation of business than either chronicles or lives.

The arrangement of the remaining portion of the Chapter is somewhat changed in the *De Augmentis* ; but the additions are not very considerable. The following paragraphs are nearly the same in the Latin as in the *English* :—

people would swear, "Ita parentis honores consecrari," which was no less than the tyranny; save that, he would stretch forth his hand towards a statue of which was erected in the same place: and men laughed at him, and said, "Is it possible?" or, "Did you do the like?" and yet thought he meant no hurt so handsomely and ingeniously. And all these were dangerous: whereas Pompey, who tended to the same in a more dark and dissembling manner, as Tacitus says, "Occultior, non melior,"|| wherein Sallust says, "conspicuo, animo inverecundo,"¶ made it his design to use secret engines, to cast the state into an absolute confusion, that the state might cast itself into his arms for safety and protection, and so the sovereign power might be in his hands, and he never seen in it: and when he had done this, he thought, to that point, when he was chosen con-

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- * Like the way of a ship in the sea.
 - † Deceit begets errors which entrap the deceiver.
 - ‡ The other does not refuse, but rather demands of the tyrant that he is.
 - So may I obtain the honours of my illustrious ancestors.
 - More cautious, but not better.
 - With probity on his lips and depravity in his heart.

never any was, yet he could make no great matter of it, because men understood him not; but was fain, in the end, to take the beaten track of getting arms into his hands, by colouring the doubt of Cæsar's design. So tedious, casual, and unfortunate are these deep dissimulations: whereof, it seems Tacitus made this judgment, that they were a cunning of an inferior form in regard of true policy; attributing the one to Augustus, the other to Tiberius, where, speaking of Livius, saith, "*Et cum artibus tanti simulatione fida bene comparata*:"* for surely the continual habit of dissimulation is but weak and sluggish cunning, and not greatly politic. . . .

But men, if they be in their own power, and do bear and sustain themselves, and be not carried away with a whirlwind or tempest of ambition, ought, in the pursuit of their own fortune, to set before their eyes not only that general map of the world, that "all things are vanity and vexation of spirit," but many other more particular cards and directions: chiefly that that being, without well-being, is a curse, and the great being the greater curse; and that all virtue is most rewarded, and all wickedness most punished in itself: according as the poet saith excellently:

Quæ vobis, quæ digna, viri, pro laudibus istis
Præmia posse rear solvi? pulcherrima primum
Divi moresque dabunt vestri.†

And so of the contrary. And, secondly, they ought to look to the eternal providence and divine judgment, which overthroweth the wisdom of evil plots and imaginations, according to the Scripture, "He hath conceived mischief, and shall bring forth a vain thing." And although men should refrain themselves from injury and evil arts, yet this incessant and unceasing pursuit of a man's fortune leaveth not that tribute which we owe to God of our time; who we see demandeth a tenth of our substance, and a seventh, which is more strict of our time: and it is to small purpose to have an erected face towards heaven, and a perpetual grovelling spirit upon earth.

* Compounded with the cleverness of her husband and cunning of her son.

† Your lavish praise and kindness, O my friends!
All power of worthy payment far transcends;
But, while such noble sentiments you guard,
God and your conscience give you best reward.

ing dust, as doth the serpent, "Atque affligit humo divinus
 tioulam auræ."* And if any man flatter himself that he
 l employ his fortune well, though he should obtain it ill, as
 said concerning Augustus Cæsar, and after of Septimius
 erus, "that they should never have been born, or else
 y should never have died," they did so much mischief in
 pursuit and ascent of their greatness, and so much good
 in they were established; yet these compensations and satis-
 factions are good to be used, but never good to be purposed.
 d lastly, it is not amiss for men, in their race toward their
 une, to cool themselves a little with that conceit which is
 gantly expressed by the emperor Charles the Fifth, in his in-
 ctions to the king his son, "That fortune hath somewhat of
 nature of a woman, that if she be too much wooed she is
 farther off." But this last is but a remedy for those whose
 es are corrupted: let men rather build upon that foundation
 ch is as a corner-stone of divinity and philosophy, wherein
 y join close, namely, that same "Primum querite."† For
 vinity saith, "Primum querite regnum Dei, et ista omnia
 iciuntur vobis:"‡ and philosophy saith, "Primum querite
 a animi, cætera aut aderunt, aut non oberunt."§ And
 ough the human foundation hath somewhat of the sands, as
 see in M. Brutus, when he brake forth into that speech,—

Te colui, virtus, ut rem; at tu nomen inane es;||

the divine foundation is upon the rock.

What is said upon the doctrine of Government and
 gislation in the *Advancement* is very short; and the
 ird Chapter of this Eighth Book of the *De Augmentis*
 nearly all new. In the earlier treatise Bacon writes:—

Concerning Government, it is a part of knowledge secret

* And with its fetters binds to earth
 The sacred spark of heavenly birth.

Seek first.

Seek ye first the kingdom of God, and all these things
 l be added unto you.

Seek first the advantages of the mind, other things will
 er not be wanting or will not oppose you.

|| I deemed thee, Virtue, a substantial form,
 And now I find thee but an empty name

and retired, in both those respects in which things are deemed secret; for some things are secret because they are hard to know, and some because they are not fit to utter. We see governments are obscure and invisible:

*Totamque infusa per artus
Mens agitat molem, et magno se corpore miscet.**

Such is the description of governments. We see the government of God over the world is hidden, inasmuch as it seems to participate of much irregularity and confusion: the government of the soul in moving the body is inward and profound, and the passages thereof hardly to be reduced to demonstration. Again, the wisdom of antiquity, the shadows whereof are in the poets, in the description of torments and pains, next in the crime of rebellion, which was the giants' offence, doth depict the crime of futility, as in Sisyphus and Tantalus. But this was meant of particulars: nevertheless even unto the general rules and discourses of policy and government there due a reverent and reserved handling.

But contrariwise, in the governors towards the governed, things ought, as far as the frailty of man permitteth, to be manifest and revealed. For so it is expressed in the Scriptures touching the government of God, that this globe, which seemeth to us a dark and shady body, is in the view of God as crystal. *Et in conspectu sedis tanquam mare vitreum simile crystallo.*† So unto princes and states, especially towards wives, mates and councils, the natures and dispositions of the people, their conditions and necessities, their factions and combinations, their animosities and discontents, ought to be, in regard of the variety of their intelligences, the wisdom of their observation, and the height of their station where they keep sentinel, in great part clear and transparent. Wherefore, considering that I write to a king that is a master of this science, and is so well assisted, I think it decent to pass over this part in silence, as willing to obtain the certificate which one of the ancient philosophers aspired unto; who, being silent, when others intended to make demonstration of their abilities by speech, desired it might be certified for his part, "that there was one that knew how to hold his peace."

* Throughout the universe, one common soul
Inspires, and feeds, and animates the whole.

† And in sight of the throne a sea of glass like unto crystal.

Notwithstanding, for the more public part of government which is Laws, I think good to note only one deficiency which is, that all those which have written of laws have written either as philosophers or as lawyers, and none as statesmen. As for the philosophers, they make imaginary laws for imaginary commonwealths, and their discourses are as the stars which give little light, because they are so high. For the lawyers, they write according to the states where they live, what received law, and not what ought to be law. for the wisdom of a lawmaker is one, and of a lawyer is another. For there is in nature certain fountains of justice, whence all civil laws are derived but as streames: and like as waters do take tinctures and tastes from the soils through which they run, so civil laws vary according to the regions and governments where they are planted, though they proceed from the same fountains. Again, the wisdom of a lawmaker consisteth not only in a platform of justice, but in the application thereof: taking into consideration by what means laws may be more certain, and what are the causes and remedies of the doubtfulness and uncertainty of law; by what means laws may be more apt and easy to be executed, and what are the impediments and remedies in the execution of laws, what influence laws touching private right of meum and tuum have into the public state, and how they may be made apt and agreeable: how laws are to be penned and delivered, whether in texts or in acts, brief or large, with preambles or without, how they are to be pruned and reformed from time to time, and what is the best means to keep them from being too vast in volumes, or too full of multiplicity and crossness: how they are to be expounded, whether upon causes emergent and judicially discussed, and when upon responses and conferences touching general points or questions: how they are to be pressed, rigorously or tenderly, how they are to be mitigated by equity and good conscience, and whether discretion and strict law are to be mingled in the same courts, or kept apart in several courts; again, how the practice, profession, and education of law is to be censured and governed; and many other points touching the administration, and, as I may term it, animation of laws. Upon which I insist the less, because I purpose, if God give me leave, having begun a work of this nature in aphorisms, to propound hereafter, noting it in the mean time for deficient.

In the *De Augmentis* he begins (as the passage is translated by Wats):—"I come now to the

of Empire, or the Knowledge of Civil Government, and in which Household Government is comprehended as a family is under a city. In this part, as I said before, I have commanded myself silence: yet, notwithstanding, I may not so disable myself, but that I could discourse of this part also, perchance not impertinently nor unprofitably; as one practised by long experience, and by your majesty's most indulgent favour, and no merit of mine own, raised by the degrees of office and honours to the highest dignity in the state; and have borne that office for four years; and, which more, have been accustomed to your majesty's commands and conferences for the continued space of eighteen years together (which even of the dullest mould might fashion and produce a statesman); and who have spent much time, amongst other knowledges, in histories and laws. All which I report to posterity; not out of arrogant ostentation; but because I presume it makes something to the honour and dignity of learning, that a man born for letters more than anything else, and forcibly carried away, I know not by what fate, against the bent of his own genius, to a civil active course of life, should yet be advanced to so high and honourable charges in the state, and that under so wise a king. But if my times of leisure shall bring forth hereafter anything touching the wisdom of government and state matters, it will be, perchance, an abortive or an after birth. "Either abortive or posthumous" are Bacon's words. For the present he proceeds to say that he will merely append two summary treatises: the first, on the doctrine of Extending the Bounds of Empire, or what he calls *Consul Paludatus* (the Consul attired in his military robes); the other, on Universal Justice, or the Fountain of Law. These two treatises make up the remainder of the Chapter. The first is merely the Twenty-Ninth Essay, entitled in the English "Of the True Greatness of Kingdoms and Estates"*. The Latin is the same as the Latin translation of the Essays executed under

* See vol. i. pp. 57-60.

on's own inspection, though not published till some years after his death;* and it is worth noticing, that

Essay in particular is recorded to have been turned into Latin by Hobbes; for it can be no other which Hobbes's friend Aubrey means by what he calls the one entitled "Of the Greatness of Cities," which he says is one of three translated by Hobbes: the titles of the other two Aubrey had forgotten. It is more probable, perhaps, that the translation was made by Hobbes for the *De Augmentis* than for the projected Latin edition of the Essays. The other treatise, on Universal Justice, the Fountains or General Principles of Law, is directed in a succession of Aphorisms, extending to ninety-nine in all. It does not admit of abridgment. Only the first Title, or Division, On the Certainty of Laws, is given, as a specimen of a complete digest of the subject, in which the noble author intimates that he entertains the prospect of executing. The following striking paragraph, which is the same in the Latin as in the English, winds up the Chapter and the Book:—

Thus have I concluded this portion of learning touching civil knowledge; and with civil knowledge have concluded human philosophy; and with human philosophy, philosophy general. And being now at some pause, looking back into what I have passed through, this writing seemeth to me, "si quæquam fallit imago"† as far as a man can judge of his own work, not much better than that noise or sound which musicians make while they are tuning their instruments; which is pleasing pleasant to hear, but yet is a cause why the music is sweeter afterwards: so have I been content to tune the instruments of the muses, that they may play that have better hands. I am surely, when I set before me the condition of these times, which learning hath made her third visitation or circuit through all the qualities thereof; as the excellency and vivacity of the wits of this age; the noble helps and lights which we have from the travails of ancient writers; the art of printing, which communicateth books to men of all fortunes; the openness of the world by navigation, which hath disclosed multitudes of experiments and a mass of natural history; the leisure where-

* See vol. i. p. 23.

† If fancy does not deceive.

with these times abound, not employing men so generally in civil business as the states of Græcia did in respect of their popularity, and the state of Rome in respect of the greatness of their monarchy; the present disposition of these times at the instant to peace; the consumption of all that ever can be in controversies of religion, which have so much diverted men from other sciences; the perfection of your majesty's learning, which as a phoenix may call whole volleys of wits to follow you; and the inseparable propriety of time, which is ever more and more to disclose truth—I cannot but be raised to this persuasion that this third period of time will far surpass that of the Græcian and Roman learning: only if men will know their own strength, and their own weakness both, and take one from the other, light of invention, and not fire of contradiction; and esteem of the acquisition of truth as an enterprise, and not as of a quality or ornament; and employ wit with magnificence to things of worth and excellency, and not to things vulgar and of popular estimation. As for my labour, if any man shall please himself or others in the reprehension of them, they shall make that ancient and patient request, “*Veni, sed audi*,”* let men reprehend them, so they observe and weigh them: for the appeal is lawful, though it may be it will not be needful, from the first cogitations of men to their second, and from the nearer times to the times farther off. Now let us come to that learning which both the former times were not pleased as to know, sacred and inspired Divinity, the sabbath and port of all men's labours and peregrinations.

The Ninth and last Book of the *De Augmentis* is comprised in a single short Chapter. A different plan being followed in the treatment of the subject, a good many things in the corresponding portion of the *Advancement* are here left out. The beginning, however, is nearly the same in both treatises. —

The prerogative of God extendeth as well to the reason as to the will of man; so that, as we are to obey his law though we find a reluctance in our will, so we are to believe his word though we find a reluctance in our reason. For if we believe only that which is agreeable to our sense, we give consent to the matter, and not to the author; which is no more than

* Strike, but hear.

would do towards a suspected and discredited
 at faith which was accounted to Abraham &
 as of such a point as whereat Sarah laughs
 is an image of natural reason.

but
 whom
 herein

Howbeit, if we will truly consider it, more — it is to
 lieve than to know as we now know. For if we wledge
 our mind suffereth from sense; but in belief suffereth
 in spirit, such one as it holdeth for more authorized than
 elf, and so suffereth from the worthier agent. Otherwise it
 of the state of man glorified; for then faith shall cease, and
 we shall know as we are known *

Wherefore we conclude that sacred Theology (which in our
 form we call Divinity) is grounded only upon the word and
 sole of God, and not upon the light of nature: for it is
 siven, "Coeli enarrant gloriam Dei;"† but it is not written,
 Coeli enarrant voluntatem Dei.‡ But of that it is said, "Ad
 rem et testimonium, si non fecerint secundum verbum
 Dei,"§ &c. This holdeth not only in those points of faith
 high concern the great mysteries of the Deity, of the creation,
 the redemption, but likewise those which concern the law
 and truly interpreted: "Love your enemies; do good to them
 that hate you; be like to your heavenly Father, that suffereth
 a rain to fall upon the just and unjust." To this it ought to
 be applauded, "Nec vox hominum sonat:"|| It is a voice
 beyond the light of nature. So we see the heathen poets, when
 they fall upon a libertine passion, do still expostulate with
 us and moralities, as if they were opposite and malignant to
 nature; "Et quod natura remittit, invida jura negant."¶ So
 did Dandamis, the Indian, unto Alexander's messengers; "That
 I had heard somewhat of Pythagoras, and some other of the
 wise men of Græcia, and that he held them for excellent men:
 at that they had a fault, which was, that they had in too
 great reverence and veneration a thing they called law and

* A translation of the greater part of the passage in the *De
 augmentis*, corresponding to this, has been already given in
 vol. i. pp. 162, 163.

† The heavens declare the glory of God.

‡ The heavens declare the will of God.

§ To the law and to the testimony: if they speak not ac-
 cording to this word, it is because there is no light in them.

|| Nor does the voice sound like that of a mere mortal.

¶ What nature grants us, envious laws deny.

manner." So it must be confessed that a great part of the law moral is of that perfection whereunto the light cannot aspire, how then is it that man is said to have light and law of nature some notions and conceits of good and vice, justice and wrong, good and evil? Thus the light of nature is used in two several senses; the one which springeth from reason, sense, induction, according to the laws of heaven and earth, the other which is imprinted upon the spirit of man by an instinct, according to the law of conscience, which is of the purity of his first estate, in which latter sense it is participant of some light and discerning touching some section of the moral law. But how? sufficient to discern vice but not to inform the duty. So then the duty of religion, as well moral as mystical, is not to be attained by inspiration and revelation from God.

The use, notwithstanding, of reason in spiritual things, the latitude thereof, is very great and general: for it is nothing that the apostle calleth religion our reasonableness of God, inasmuch as the very ceremonies and figures of old law were full of reason and signification, more than the ceremonies of idolatry and magic, that are nonsignificants and surd characters. But most especially Christian faith, as in all things, so in this, deserves to be highly magnified; holding and preserving the golden mean in this point between the law of the heathen and of Mahomet, which have embraced the two extremes: the religion of the heathen had no constant belief or opinion, but left all to the liberty of argument; and the religion of Mahomet, on the other side, interdicteth argument: the one having the very face of error, and the other of imposture; whereas the faith doth both admit and reject argument with difference.

In the *Advancement*, Bacon considers the Science of Divinity in both its parts; "the matter informed, and the nature of the information or revelation." In the *De Augmentis* he writes (as the passage is ordered by Wats)—"And now, most excellent Majesty, have with a small bark, such as we were able to sail about the universal circumference, as we have done in the new world of sciences; with how poor a vessel and course we leave to posterity to judge."

remains, but that, having accomplished our design, we should pay our vows? But there rests yet behind Sacred Inspired Divinity. Whereof, if we should proceed to entreat, we should [have to] depart out of the pinnacle of human reason, and go into the ship of the Church; which must alone be governed by a divine sea needle [on which when governed by a divine compass is able] to direct her course aright. For the stars of Philosophy, which [have] hitherto shined forth unto us, and were our chief guide, here fail us: it were then meet we kept silence in this sacred subject. Whereupon we shall omit the just Partitions of this Knowledge; yet, notwithstanding, somewhat we will cast into this treasury, by way of good wishes, according to the proportion of our slender abilities. This we do the rather, because we find no coast or space of ground in the whole body of Divinity lying vacant and untilled; so diligent have men been, either in sowing of good seed or sowing of tares." And he goes on to state, that he will therefore confine himself to the propounding of three Appendices of Theology, treating not of the subject matter of the science, but only of the manner in which it is conveyed to the mind. Neither does he add, will he here subjoin treatises or examples, lay down precepts, as he has done in other cases—these he will leave to theologians; all, he repeats, that he professes to offer are merely vows.

The three Appendices are,—the doctrine of the right use of Reason in religion; the doctrine of what he calls the degrees of Unity in the City of God; that is, of the principle of agreement which pervades the Scriptures, even when there seems to be a diversity between one passage and another; and a succinct, sound, and judicious collection of annotations and observations on particular passages of Scripture, neither running into common-place nor digested into any methodical form, but retaining both the variety and the flavour belonging to the texts in their original position, which he would call Emanations of the Scriptures.

A considerable part, both of what is discarded from this portion of the *De Augmentis* and of what is retained

is nearly the same with what is found in the "Adment" and the "Considerations," touching the Church of England,* and other theological writings of Bacon. It will be enough that we transcribe another short extract from the *Advancement*, the substance of which, somewhat differently arranged, is also found in the *Two modes of expounding or interpreting Scripture* been mentioned, "which had need be contained within the bounds of sobriety," the anagogical (or that which is inquisitive after mysteries), and the philosophical.

For the latter, it hath been extremely set on foot of late by the school of Paracelsus, and some others, that pretend to find the truth of all natural philosophy in the Scriptures; scandalizing and traducing all other philosophy to be foolish and profane. But there is no such enmity to God's word and his works; neither do they give honour to the Scriptures, as they suppose, but much imbase them, to seek heaven and earth in the word of God (whereof it is said, "Heaven and earth shall pass, but my word shall not"), is to seek temporary things amongst eternal: and as to seek divinity in philosophy is to seek the living amongst the dead, so to seek philosophy in divinity is to seek the dead amongst the living: neither are the pots or lavers, whose place is the outward part of the temple, to be sought in the place of all, where the ark of the testimony was seated. Again, the scope or purpose of the Spirit of God is to express matters of nature in the Scriptures, otherwise than in the passage, and for a plainer relation to man's capacity, and to moral or divine. And it is a true rule, "Auctoritas parva auctoritas,"† for it were a strange conceit if a man should use a similitude for ornament or illustration sake, borrowed from nature or history according to the conceit, as of a basilisk, an unicorn, a centaur, a Bellerophon, Hydra, or the like, that therefore he must needs be content to affirm the matter thereof positively to be true.

The Scriptures, being given by inspiration, and not by human reason, do differ from all other books in the world, which, by consequence, doth draw on some difference

* See vol. i., pp. 138-159

† The authority of an author travelling out of his own country is small.

used by the expositor. For the inditer of them did know our things which no man attains to know; which are, the mysteries of the kingdom of glory, the perfection of the laws of nature, the secrets of the heart of man, and the future succession of all ages. For, as to the first, it is said, "He that resetteth into the light shall be oppressed of the glory." And again, "No man shall see my face and live." To the second, "When he prepared the heavens I was present, when by law and compass he enclosed the deep." To the third, "Neither was it needful that any should bear witness to him of man, for he knew well what was in man." And to the last, "From the beginning are known to the Lord all his works." . . .

It is an excellent observation which hath been made upon the answers of our Saviour Christ to many of the questions which were propounded to him, how that they are impertinent to the state of the question demanded; the reason whereof is, because not being like man, which knows man's thoughts by his words, but, knowing man's thoughts immediately, he never answered their words, but their thoughts: much in the like manner it is with the Scriptures, which, being written to the thoughts of men, and to the succession of all ages, with a foresight of all heresies, contradictions, differing estates of the church, yea and particularly of the elect, are not to be interpreted only according to the latitude of the proper sense of the place, and respectively towards that present occasion whereupon the words were uttered, or in precise congruity or contexture with the words before or after, or in contemplation of the principal scope of the place; but have in themselves, not only totally or collectively, but distributively in clauses and words, infinite springs and streams of doctrine to water the church in every part. And, therefore, as the literal sense is, as it were, the main stream or river; so the moral sense chiefly, and sometimes the allegorical or typical, are they whereof the church hath most use. Not that I wish men to be bold in allegories, or indulgent or light in allusions: but that I do much condemn that interpretation of the Scripture which is only after the manner as men use to interpret a profane book.

The conclusion of the *Advancement* is as follows:—

Thus have I made as it were a small globe of the intellectual world, as truly and faithfully as I could discover; with a note and description of those parts which seem to me not constantly occupate, or not well converted by the labour of man. In which, if I have in any point receded from that which is

commonly received, it hath been with a purpose of process in "inclinatio,"* and not in "ablatio;"† a mind of amendment and patience, and not of change and difference. For I cannot be true and constant to the argument I handle, if I be not willing to go beyond others, but yet not more willing to have others go beyond me again which may be best appear by this, that I have propounded my opinions modestly and unarmed, not seeking to pre-emptuate the liberty of judgments by confutations. For in anything which I have set down I am in good hope that, if the first reading move objection, the second reading will make an answer. And those things wherein I have erred, I am sure I have not perverted the right by litigious arguments; which certainly have this contrary effect and operation, that they add authority to error, and destroy the authority of that which is well invented for question is an honour and preferment to falsehood, and on the other side it is a reproach to truth. But the errors I own and challenge to myself as my own, the good, if any be due "tanquam aequi sacrificii,"‡ to be incensed to the honour first of the Divine Majesty, and next of your majesty, to whom on earth I am most bounden.

In the *De Augmentis*, for the two last sentences, others to the following effect are substituted: "Meanwhile there cometh into my mind that answer of Themistocles who, when an ambassador from an inconsiderable town had made him a speech full of lofty expressions, checked him with the reply: 'Friend, thy words would require an age.' Assuredly I conceive that it may be most reasonably objected to me, that my words would require an age; a whole age, perhaps, to prove their truth, and more to bring about their accomplishment. Nevertheless seeing that even the greatest things are owing to their beginnings, it will be enough for me to have sown in posterity and to the everlasting God, whose divine Majesty I humbly implore through his Son and Saviour, that these sacrifices of the human understanding and other such as these, sprinkled with religion as with salt, and offered to his glory, he would graciously vouchsafe to accept."

* To a better object.

† To a different object.

‡ As the fat of the sacrifice.

added to the work is an enumeration, under the *Novus Orbis Scientiarum, sive Desiderata* (The world of Sciences, or Things Desiderated), of the branches of knowledge that have in the course of declared to be deficient, that is to say, imperfectly or not at all. This list may be regarded as a of the conclusions which it has been the object ork to establish, and it is further interesting from new Baconian designations which it contains. owing are enumerated as the *Desiderata* that en noticed in Book II.;—The Errors of Nature (*Naturae*), or the History of Monsters (*Monstrorum-generationum*); the Fetters of Nature (*Vincula*), or Mechanical History; Inductive History, or History arranged for the building up of Philosophy the Eye of Polyphemus (*Oculus Polyphemi*), or History of Learning; History for the illustration of Prophecy (*Historia ad Prophetias*); Philosophy according to ancient Parables. Those in Book III.:—Philosophy (*Philosophia Prima*), or the axioms common to all the sciences; Living Astronomy (*Astrologia Viva*); Sound Astrology (*Astrologia Sana*); Solution of Natural Problems; Opinions (*Placita*) of ancient Philosophers; the Part of Metaphysics which relates to the Forms of things; Natural Magic, or Conversion of Forms to Effects; Inventory of Human Knowledge; Catalogue of things of Multifarious Use (*Polytechnum*). Those in Book IV.:—The Triumphs of the doctrine of the Highest Flights (*de Summis*) of Human Nature; the Physiognomy of the human motion; Medical Narrations; Comparative Anatomy; the Science of the Cure of Diseases held to be incurable; Of Exterior Euthanasia (that is, the means of procuring easy death so far as regards bodily sensation); Of Medicines of proved virtue (*de Medicinis Authenticis*); Solution of Natural Hot-springs; the Medical Clue (*Medicinale*, that is, a rule for the guidance of practice); the Prolongation of Life; Of the Nature, or Essence, of the sensitive Soul; Of the Nature of the Spirit in Voluntary Motion; Of the Difference between Perception and Sense; the Root, or

Origin, of Perspective (*Radix Perspectivæ*), or the doctrine of the Form of Light. Those in Book V. : Learned Experience, or the Chase of Pan (that is, Nature), the New Instrument (*Novum Organum*) Particular Topics, Refutations of False Imaginations, Sophisms (*Elenchi Idolorum*); Of the Analogy of Demonstrations. Those in Book VI. : Of the Marks of Things Philosophical Grammar (*Grammatica Philosophans*), the Transmission of the Light, or Method of handing down Knowledge to posterity (*Transmissio Lampadis, sive Methodus ad Filios*), Of the Wisdom (*Prudentia*) of Private Discourse, the Colours of apparent Good and Evil, both simple and comparative, Antithetical Statements of Truths (*Antitheta Rerum*), the Minor Formulae of Oratory. Those in Book VII. : — Serious Satire, or the doctrine of the insides of things (*Satura Seria, sive Interioribus rerum*), the Georgics of the Mind, or the Culture of the Moral nature. Those in Book VIII. : The Amanuensis of Life, or the doctrine of Dispersed Occasions (*De Occasionibus Sparsis*); the Architect of Fortune, or the doctrine of Rising in Life (*Faber Fortunæ, sive de Ambitu Vitæ*), the Military Statesman (*Consul Paludatus*), or of Extending the bounds of Empire, the Idea of Universal Justice, or the doctrine of the Fountains of Law. Those in Book IX. : — Sophism, or the doctrine of the Right Use of Human Reason, Divinity; Irenæus, or the doctrine of the degrees of Unity in the City of God, the Celestial Wine-shop (*Utres Coelestes*), or the Emanations of the Scriptures.

Such is the survey of human knowledge, and of the world of possible speculation, which Bacon takes in the "Two Books of the Proficiency and Advancement of Learning," and the Nine Books of the treatise "*Dignitate et Augmentis Scientiarum*," into which these were afterwards expanded. It is remarkable that the second work, published after so long an interval, should exhibit so little deviation from the first, except only in the way of extension, and here and there of somewhat greater precision of statement. Scarcely any thing to

ound in the *Advancement* is either contradicted or even by implication retracted or abandoned in the *De Augmentis*: the few omissions are of passages, which, on whatever account their retention may have been thought objectionable, make no part of the exposition of the author's philosophical views, and seem to have been discarded only on the principle indicated in his letter already quoted, to the King, in which he says that he has been his own *index expurgatorius*, in order that the work might be read in all places.* The substance, too, of the *Advancement*, there is reason to believe, had been for the greater part excogitated, and to some extent even reduced to the shape in which we actually have it, a considerable time before it was published. In a letter sent to his friend Matthew with the printed volume, Bacon, as we have seen, speaks of the First Book as having been seen by Matthew in a completed state, it may have been years before. But, however this may be, there is at any rate a perfect or nearly perfect consistency throughout the whole course of Bacon's writings, in so far as they relate to what is commonly understood by his system of philosophy, whether they may have come from his pen in the earlier portion, in the middle, or towards the close of his life. His views are of course more fully developed in those of them that are of later date: but even in the earliest, if we do not find the seeds of all his subsequent speculations, we can detect nothing which enables us to infer that his opinions had ever undergone any change. There is every reason to believe that his early friend Rawley only states the fact when he tells us that it was while he was still at the University, and is yet only in his sixteenth year, that he fell into that dislike of the philosophy of Aristotle, in which he continued to his dying day.† I may be reasonably supposed, however, to have been told till a somewhat later date that he arrived at those other views which he regarded as constituting his own philosophy. He has himself, in fact, noted what it was that these new views first assumed any thing of distinctness

* See ante, page 60.

† See vol. i. y. W.

and consistency in his mind. In his letter to Fulgentio, written in 1623 or 1624, after speaking of the zeal and constancy with which he had cherished the scheme of his *Instauratio Magna* through so many years, he proceeds (to adopt the translation in the *Biographia Britannica*): "For well I remember that forty years ago I composed a juvenile work about these things, which with great confidence I graced with the swelling title 'The Greatest Birth of Time' (*Temporis Partus Maximus*)" This would be when he was in his twenty-third or twenty-fourth year.

The great principle of the Baconian philosophy, however, the investigation of nature by experiment, is generally indicated either in the *Advancement of Learning*, or even in the *De Augmentis*. Its complete explanation, and the method of applying it, form the subject of the Second Part of the *Instauratio Magna*, the *Novum Organum*, to which we now proceed.

SECTION III.

THE NOVUM ORGANUM, FORMING THE SECOND PART OF
THE INSTAURATION MAGNA.

THIS Second Part of the *Instauration*, it is to be recollected, was the portion of the work that was first published. It appeared in a folio volume in October, 1620, with the title of ‘*Novum Organum Scientiarum, sive Instaurationis Magnae Pars Secunda.*’ The First Part of the *Instauration*, the treatise ‘*De Dignitate et Augmentis Scientiarum,*’ which we have just reviewed, was not given to the world till 1623, with the exception of much of it as is contained in the ‘*Two Books of the Proficiency and Advancement of Learning,*’ which had been published in 1605.

The amplification of the *Two Books of the Advancement* into the *Nine Books of the De Augmentis*, and the notation of the extended treatise to form the First Part of the *Instauration*, would appear not to have been contemplated in the original design of that work, nor even in the Second Part of it, the *Novum Organum*, was published. At the head of the latter, as has been already mentioned, was given an intimation to the effect that the First Part of the *Instauration*, containing the divisions of the Sciences, was wanting; but that the partitions might in part be sought from the Second of the ‘*Proficiency and Advancement of Learning.*’ The two treatises, the *De Augmentis* and the *Organum*, were afterwards distinctly connected in publication along with the former both of the prefatory advertisement by Rawley, and of a note appended stating that after the *De Augmentis* followed the Second Part of the *Instauration*, explaining

the art of interpreting nature, and of the true application (*adoperationis*) of the intellect; not however in form of a finished treatise, but only digested, according to the heads of the subject, into aphorisms. The ordinate title of the *Novum Organum* is 'Indicationes Interpretatione Naturae, sive de Regno Hominis' (indications respecting the Interpretation of Nature respecting the Kingdom of Man).

The reader has already been informed that the *Novum Organum* were prefixed various prolegomena which are properly to be regarded as introductory to the entire body of the *Instauratio Magna*. The *Organum*, however, has also its own Preface, specifying its nature and design.

In this discourse Bacon begins by observing that those who have pronounced of nature as of a thing not yet explored have done the highest detriment to philosophy and the sciences, by extinguishing inquiry except in proportion as they have gained credit; while those on the other hand, have asserted that nothing is certainly known, although they have adduced authorities for their opinion not to be despised, have yet altogether exceeded the bounds of truth. The more ancient of the Greek philosophers, whose writings have appeared to him to have taken a wiser course than their successors: keeping a middle way between dogmatism and scepticism, and moreover being accustomed to test and judge of nature rather by experiment than by disputation yet even they followed no rule or method in their experiments, but employed only the unrestrained force of the intellect, and placed all their dependence upon intense meditation and perpetual revolution and agitation of mind. He then proceeds to describe verbally his own method, as consisting in guarding the sense by what he calls a certain reduction (*per reductionem quandam*), by which he perhaps means a drawing of it back to its proper function, in rejecting for the most part the mental operation which follows the conclusion—that is, apparently, the conclusion to which the

ing is naturally inclined to come at once on the first intimation of the senses." And in laying open the springs of the mind a new and certain rule from the operations of the senses. That the mind of a philosopher is not as it is to have been without perception by those well assigned so great a degree of elevation from the manner in which he began. Was rather efficacious in revealing that it is not so; that, so that nothing, he confesses, is that the whole work of the mind be effected, that from the very commencement the mind is not left to itself, but always forced to something to that; and that the business be done by means of machinery. The necessity of this, and the production of all great effects in the arts, is insisted upon as an illustration and a similar necessity in works of the mind. Two affirmations are then propounded: the first respecting persons, the second to things. The honour which is due to the ancients Paccin professes to be as of allowing to remain undiminished and undisturbed, then, it comes into no opposition or of the intellectual rank or method by which he is to proceed, this one is one which was to them a natural and rational. Nor is it any part of his intention to put a down either the actually existing philosophy, or any other system, more correct or more extensive, which may exist or may arise. It is only that that the received philosophy and systems of the like kind may be employed pro-

As also the passage is rendered by Shaw,—“to guard every action from that” explained in a foot-note as “any extraneous ways of the smiting things, in a manner, to the senses, that a true judgment may be of them when this again brought under view” why to reject that work of the mind which is consequent on sense.” Mr. Wood’s translation is,—“We, as it respects the senses to their former rank, but generally out operation of the mind which follows close upon the

erly and with good effect in promoting discussion, embellishing oratory, in the professorial office, in the business of civil life. Nay, he adds, we openly intimate and declare that the philosophy which we bring forward will not be very useful for such purposes. It is not ready at hand; it is not to be caught hold of in passing; it does not flatter the understanding through its preconceived notions, it does not descend to the apprehension of the multitude, excepting only in its utility and its effects. Let there be, then, he continues, as well and happy may it prove for both, two emanations and also two dispensations of learning; two tribes as it were, kindreds of contemplators or philosophers, and they not enemies or aliens the one to the other, but confederated and bound together by assistance mutual rendered: in a word, let there be one method of cultivating the sciences, and another of discovering them. The former he afterwards proposes to call the Anticipation of the Mind: the latter, the Interpretation of Nature. He concludes by requesting that the reader, notwithstanding all the pains he has taken to make his statements not only true but perspicuous, will not expect to acquire a full understanding and conviction of what the work sets before him by a cursory or inattentive perusal of it, but that whoever would really comprehend the new system of philosophy will try the method himself, will accustom his mind to that subtilty of thinking which experiment alone discovers, will finally correct the depraved and deeply inherent habits of his mind to temperate and as it were legitimate hesitation, and when only (if it should so please him) make use of judgment after he has begun to be master of himself.

The First Book of the *Novum Organum* is, not perhaps in respect of its pure Latinity, but yet in all such essential qualities of writing as do not depend upon the usages of a particular language, one of the most perfect of human compositions. Every sentence has evidently been elaborated with the greatest care; and yet the easy unforced flow and animation of the expression are as remarkable for its economy, compactness, and perspicuity. Not

of fact, and yet nothing is harsh or cramped in the English translation. In any other writing in which the imagination and energy are so admirably united with the highest qualities of illustration and accurate descriptive eloquence. No where else. It is not only in fact and either, or, and a series of brilliant sentences, it is a splendid mere statement.

In the present and beauty must be lost in the English translation. It is perhaps due to qualities in the language which the English does not possess, but it has been wanting if the work had been by Bacon himself in his mother tongue—although even its place would probably have been supplied by something of a different kind. The first translation of the *Natural Organum* professing complete was that given by Shaw in his edition of Bacon's *Philosophical Works*, 3 vols., 4to, London, 1790.

The next is that published in the 14th volume of Manning's edition of Bacon's Works, 8vo., London, 1831, which was executed by Mr. William

And there is a third translation, of which, however, we have seen only the First Book, by the late Glasgow, Esq., 8vo., Edinburgh, 1844.

These four, however, of Book First may be regarded as stating the principles or ideas that form the basis of the work. They may be thus literally translated:—

and the servant and interpreter of nature, does and knows so far as he may have observed, respecting the nature, in things or in his mind; and further he has knowledge and power.

that is, by simple observation of facts, or by meditation. The original is "quantum, de naturae ordine, mente observaverit." In the *Distributio Operis*, where the same is given in the same terms with the exception of one phrase, we have "opere vel mente observaverit." The case the distinction that is intended to be marked is things, facts, effects, and the inferences which the

2. Neither the naked hand, nor the understanding left itself, can do much; the work is accomplished by instruments and helps, of which the need is not less for the understanding than for the hand. And as the instruments of the hand either excite or guide its motion, so also the instruments of the mind either prompt or guard the understanding.

3. Human knowledge and power coincide, because ignorance of the cause frustrates the effect. For nature is not conquered except by obeying her, and whatever in contemplation is of the nature of a cause, that in operation is of the nature of a rule.

4. For works man can do nothing else than apply and remove natural bodies; the rest nature performs within herself.

The next fourteen aphorisms are employed in pointing out how little had yet been done by man, and the cause of the imperfect state in which the arts and sciences still remained. Although the number of processes known and practised, it is observed, might be thought considerable, yet the number of axioms discovered was small. The sciences as they existed, Bacon complains, were only arrangements of things actually found out, not methods of invention, or designations of new operations. All this he conceives to have arisen from the over-estimation which men have held the unassisted powers of the human mind, and their consequent neglect of its true helps. At length he expatiates, in nearly the same words as in the *De Augmentis*, upon the inutility, and worse than inutility of the common logic in the invention or promotion of science upon the defects of the syllogism, and upon the erroneous character of most of the received notions in physics, as well as the insufficiency of the evidence on which they rest.

mind draws from them. Mr. Glassford's version is, "man have observed by sense or mentally." Mr Wood translates—"Man, as the manager and interpreter of nature, does as much as his observations on the order of nature either with regard to things or the mind, permit him." If positively wrong, this is certainly at least obscure and liable to be entirely misunderstood by an English reader. "Observations on the order of nature, with regard to the mind" is not part of Bacon's idea. What he speaks of is, distinctly, observation by the mind.



The old and the new, the wrong and the right way of proceeding are thus stated in the 19th aphorism :

There are and can be but two ways of investigating and discovering truth. The one from senses and particulars flies to the most general axioms, and from those principles and their never questioned truth judges of and derives intermediate axioms; and this is the way in use. The other raises axioms from senses and particulars, by ascending continuously and step by step, so that the most general axioms are arrived at in the last stage; which is the true way, but untried.

When the intellect is left to itself it takes the first way, after the order observed in logic. A man of a sober, patient, and grave disposition may, even with his understanding left to itself (especially if it be not impeded by the received doctrines) sometimes try the other way; but he will not advance far in it. The difference between the two methods, it is then pointed out in the 22nd aphorism, lies wholly in the way in which the mind ascends from the senses and from particulars to general truths. They both begin with the former and end with the latter; but in the one experiments and particulars are only cursorily glanced at, in the other they are considered carefully and after a certain plan; the one sets out with the establishment or assumption of a number of abstract and useless general principles; the other rises by degrees to those which are in reality the best known to nature. There is no small difference between the *Idola*, or false images, of the human mind, and the ideas of the divine mind; that is, between certain vain opinions, and the true signatures and impressions made upon created things, as really discovered. The axioms in common use, it is remarked in the 25th aphorism, were all derived from a very scanty experience wholly gathered by the unassisted hand,* and from a small number of particular

* But we are not sure that this is what Bacon means by "*ex tenui et manipulari experientia*," literally, from an experience scanty and held in the hand. Mr Wood's translation is, "from a scanty handful, as it were, of experience;" Glanville's, "from a slender and manipular experience."

acts of most common occurrence. if any instances presented themselves which had not been before observed or known, the axiom, instead of being properly corrected, was wont to be saved, or maintained unaltered, by means of some frivolous distinction.

The Twenty-sixth Aphorism repeats the intimations already given in the Preface, that the investigation of Nature by human reason alone will be called the Anticipation of Nature, as being a method both rash and premature, and that the name of the Interpretation of Nature will be reserved for that method which is in proper manner elicited from things. In subsequent Aphorisms we have an amplification of what has been further stated in the Preface as to the advantage that anticipations have in producing unanimity—for if all men were even to become insane in one way, and with conforming notions, they might agree very well among themselves, while, on the contrary, interpretations have no power of suddenly striking the understanding, so that in so far as regards conclusions hard to be believed, and at variance with common opinions, they must seem almost like mysteries of faith. Yet, while anticipation and logic may be properly employed in sciences which are founded upon opinion, where the object is to subvert not the realities of nature but the assent of men's minds, no progress could ever be made by that method in true science, even if all the capacities of all men should unite, and combine and transmit their labours.

The Thirty-eighth Aphorism introduces us to the doctrine of the *Idola* and false notions occupying the human understanding, of which a sketch has also been given in the Fifth Book of the *De Augmentis*. The Latin, rather Greek, word, *Idola*, it is to be observed, does not mean what we call idols or false divinities, nor does Bacon anywhere so express himself as to lead us to suppose that he intended it to suggest such a notion, though he has been commonly so understood. The English word that answers best to both the classical and the Baconian *idola* (which are the same) is *spectres*.*

* Cicero, in a letter to his friend Cavius Cassius (Fam.

The *Idola* and false notions, it is declared in this Thirty-eighth Aphorism, which have taken possession of the human understanding, do not only oppose the entrance of truth, but, even after it has obtained admission, will meet and molest us in the restoration of the sciences, unless men, forewarned, shall, as far as it can be done, guard themselves against them.

The *Idola* which beset the human mind are declared to be of four kinds :—the *Idola Tribus* (Spectres of the Tribe or Species) ; the *Idola Specus* (Spectres of the Cave or Den) ; the *Idola Fori* (Spectres of the Market-place) ; and the *Idola Theatri* (Spectres of the Theatre). The Spectres of the Tribe are such deceiving or blinding opinions and tendencies as are inherent in the very nature of man, and arise from the distorted views of things which are occasioned by the imperfection both of our senses and of our minds. The Spectres of the Den are the false notions peculiar to each individual. For every man, we are told, beside the aberrations belonging to human nature in general, has a certain den or cavern of his own, which breaks and corrupts the light of nature ; and this comes either of his proper and distinctive disposition or character, or of his education and his intercourse with other men, or of his reading of books and the authority of the persons whom he respects and admires, or of the different impressions that the same things and considerations make according as they present themselves to a mind preoccupied and predisposed, or to one in an equable and calm state, or of other like causes. The Spectres of the Market-place are those prevalent misconceptions that are begotten of the intercourse of men with one another ; which is necessarily carried on by words ; and words are imposed according to the apprehension of the multitude, and are consequently full of folly and mischief. Finally, the Spectres of the Theatre are those that have been raised in the minds of men by the diverse dogmas of the

16), observes that Catus, the Epicurean, who had lately died, had given the name of *Spectra* to what Epicurus himself, and, before him, Democritus, had called ἰδωλα.

several philosophical systems, and even by the perverted rules laid down for demonstration; and they are so numerous, says Bacon, all the philosophies that have been received or invented we regard as only so many phantoms produced and acted, which have created fictitious and chimerical worlds. He then proceeds to consider the description of spectres more at length by itself.

First, as to the Spectres of the Tribe. Their causes or sources, are the following.—1. The human understanding is so constituted that it is apt to assume a greater order and equality in nature than is found actually to exist. 2. The human understanding, when it has once got hold of any notion, or supposed principle, is given to make all the facts it afterwards meets with accord with that, and lend it their support. It is also much more easily moved and excited by affirmatives than by negatives, that is, by instances that seem to support its preconceived notions, than by such as seem to be opposed to them. 3. The human understanding is most stirred up by those things that strike and enter the mind at once suddenly, and by which the fancy is wont to be filled and inflated: hence it conceives to itself all other things of the same kind with those few by which it is begun and possessed, and is slow in making its way to those remote and heterogeneous instances by which axioms are proved as by fire. 4. The human understanding is incapable of standing still or resting in any conclusions, but will still be pressing forward, with however vain advantage. It cannot conceive any extreme boundary of the universe, nor, on the other hand, can it find for itself any firm footing either upon the idea of infinity in duration, or upon that of the infinite divisibility of lines. This impotency of the mind chiefly proves pernicious in the discovery of causes, incapable of resting satisfied with those of greatest generality, beyond which nevertheless it is impossible to go, in searching for others farther away it falls upon such as are in fact nearer, namely, what are called final causes, that is, the mere purposes or designs with which things are supposed to have been created. This class of considerations which plainly belongs rather

Bacon's day, from the telescopic or microscopic character of the mind)."

The Spectres of the Market are characterised as the most troublesome of all. They, as before stated, are those which have insinuated themselves into the understanding from the associations of words and images. They are of two kinds, either names of things which do not exist, or names confused and ill constructed, and inconsiderately and unfairly (*inæqualiter*) abstracted from things. The false notions produced by the latter are those that cling most obstinately to men's minds.

Lastly, the Spectres of the Theatre are discussed in the seven aphorisms from the 61st to the 67th inclusive. These are neither native to the mind, nor do they make their way into it by any secret insinuation, but are introduced by and received openly from the falacious representations of philosophical theories, and from the perverse established rules of reasoning. At the same time, Bacon repeats, he has no quarrel with the authors of these theories about anything more than the method of inquiry. Let the ancients, he exclaims, keep their doors. But, as they say, a lame man in the right path will outstrip the swiftest runner out of it, for it is clear that, the stronger and swifter the latter is, the farther will he be carried from his object. His own method Bacon describes as leaving little to neatness and length of wit, but, on the contrary, as almost reducing all wits and intellects to the same level. This strange notion appears to have been deeply implanted in his mind. The Spectres of the Theatre, he proceeds to observe, are very numerous, and may and perhaps will become time much more so. The comparatively small number of new philosophical theories that the modern world had produced he attributes to men's minds having

The Latin is "ex objectis largis et minutis;" but the meaning of the expression is sufficiently explained by the "7th Aphorism," of which it is a brief summary. Mr. Wood's translation—"the extent or narrowness of the objects"—is more exactly considered to convey Bacon's meaning. Mr. Wood translates, "from largeness or minuteness of the objects perceived."

been for many ages so much occupied with religious and theological questions. False philosophy he divides in three kinds, sophistical, empiric, and superstitious. The following is the 63rd Aphorism, as translated by Mr. Wood:—

Aristotle affords the most eminent instance of the first, for corrupted natural philosophy by logic:—thus he formed the world of categories, assigned to the human soul, the noblest substances, a genus determined by words of secondary operation, treated of density and rarity (by which bodies occupy greater or lesser space) by the frigid distinctions of act and power, asserted that there was a peculiar and proper motion to all bodies, and that, if they shared in any other motion, it was owing to an external moving cause, and improved innumerable arbitrary distinctions upon the nature of things, but everywhere more anxious as to definitions in teaching, and to accuracy of the wording of his propositions, than the utter truth of things. And this is best shown by a comparison of his philosophy with the others of greatest repute among the Greeks. For the similar parts of Anaxagoras, the atoms of Leucippus and Democritus, the heaven and earth of Parmenides, the discord and concord of Empedocles, the resolution of bodies into the common nature of fire and their condensation according to Heraclitus exhibit some sprinkling of natural philosophy, the nature of things, and experiment, whilst Aristotle's *Physica* is mere logical terms, and he remodelled the same subject in *Metaphysics* under a more imposing title, and wrote as a reader, a nominalist. Nor is much stress to be laid on his frequent recourse to experiment in his books on Animals, his Problems, and other treatises: for he had already decided, without having properly consulted experience as the basis of his decisions and axioms, and, after having so decided, he drags experiment along as a captive constrained to accommodate herself to his decisions: so that he is even more to be blamed than his modern followers (of the scholastic school) who have deserted her altogether.

The Empiric philosophy produces conclusions more deformed and monstrous than the Sophistic, or that which proceeds merely upon reasoning (*ratiomale genus*), because it is founded not upon the light of vulgar notions (which, although weak and superficial, yet is in a sense universal and pertinent to many things), but upon the narrowness and obscurity of a few experiments. The

phy of the alchemists and that of Gilbert are referred to as instances. There is considerable . Bacon thinks, that even his own method, of experiment makes so important a part, may in some give birth to much erroneous philosophizing empiric kind.

is Mr. Wood's translation of the 65th Apho-

corruption of philosophy by the mixing of it up with superstition and theology is of a much wider extent, and is most as to it both as a whole and in parts. For the human understanding is no less exposed to the impressions of fancy, those of vulgar notions. The disputatious and sophistic intraps the understanding, whilst the fanciful, bombastic, if it were, poetical school, rather flatters it. [Mr. Wood cited the next sentence:—For there is inherent in man a ambition of the intellect, not less strong than that of the specially in high and soaring wits] There is a clear of this among the Greeks, especially in Pythagoras, however, the superstition is coarse and overcharged; but more dangerous and refined in Plato and his school. This could also in some branches of other systems of philosophy where it introduces abstracted forms, final and first omitting frequently the intermediate, and the like. It we must use the greatest caution: for the apotheosis is the greatest evil of all, and where folly is worshipped, it were, a plague-spot upon the understanding. Yet some moderns have indulged this folly with such consummate levity, that they have endeavoured to build a systematical philosophy on the First Chapter of Genesis, the Book and other parts of Scripture; seeking thus the dead in the living. And this folly is the more to be prevented trained, because not only fantastical philosophy but heresies, spring from the absurd mixture of things divine and man. It is therefore most wise soberly to render unto each things that are faith's.

much for the erroneous manner of viewing nature; various or wrong matter of contemplation is next discussed. It is observed that the human understanding, aided by the inspection of the processes of the mechanicals, in which bodies are so much changed by combinations and separations, is apt to assume that something

of the same kind takes place in universal nature. By the fiction of elements, and their concurrence, for the production of natural bodies. Again, we find in nature different species of things, such as animals, plants, mines, where we are prone to fall into the imagination that there are certain primary forms which nature always strives to produce and that the remaining variety consists of the impediments and aberrations experienced by nature in the accomplishment of her work, or of the conflict of different species, and the transformation of one into another. Hence the doctrine of elementary qualities, and that of occult qualities and specific virtues, it is a much greater evil that men are given to contemplate and inquire into rather the quiescent principles *of which* than the moving principles *by which* things are made. For the former all look to the purposes of the course, only the latter to actual effects. As example of the latter, and as principles worthy of observation, Bacon mentions the mutual appetite or inclination for concourse which he says there is in bodies, so that they will permit the unity of nature to be ever entirely destroyed or cut asunder and a vacuum to be formed; the disposition of bodies to return to their natural dimensions and degree of tension, so that, if they be either compressed within it or drawn out beyond it, they will strive to recover and restore themselves into their former space and extent, and the other disposition which he conceives bodies to have of congregating towards masses of the same nature, the dense, namely, towards the globe of the earth, the weak and rare towards the concave of heaven. These assumptions may serve as specimens of Bacon's principles or general notions of natural philosophy. He adds that another evil not less considerable is the habit or tendency men have, in their philosophical contemplations, of bestowing their labours in investigating and discussing the principles or beginning of things, and what he calls the ultimities (*ultimitates* meaning, apparently, the extreme possibilities, of nature) whereas all utility and operative power consists in the intermediate.

The subject of the Spectres of the Theatre, and of

all spectres of all kinds, is concluded by a caution against the intemperate tendency of one class of philosophical theories to yield assent, and of another to withhold; of the positive or dogmatic schools on the one hand, and of the sceptical on the other. Both tendencies, it is remarked, have the effect of fixing and increasing and perpetuating spectres, or false notions, by shutting out the light that would remove them. The first presses, the second enervates the understanding. The former marked the philosophy of Aristotle: the latter, that of Plato, and still more that of the New Academy, which dogmatised scepticism and distinctly set it as a tenet. Bacon admits the sceptical to be more honest (as his word, *honestior*, seems to mean) than the dogmatic; but yet, he observes, the human mind has once despaired of discovering all its operations become languid, and men rather incline to pleasant disputations and discourses (*disputationes*), and to a sort of wandering over things, than to proceed firmly in severity of investigation. But, he adds, we have said from the first, and what we constantly have in view, is, not that the senses and the human understanding, with all their weakness, are to be denied authority, but only that they are to be furnished with assistance. Finally he declares that all these Spectres of error, must be by a solemn determination abjured and renounced,* and the understanding wholly liberated and freed from them, so that there shall be no other

The words here used by Bacon—"abneganda et renunciantia"—might at first seem to give some countenance to the supposition that he used the Latin word *Idola* in the sense in which it is found in the ecclesiastical writers, or for what we now call idols. And he may have been betrayed for a moment into this conception of the term. But even this passage, looked at the whole, scarcely admits of such an interpretation: the Spectres become again immediately mere shadows, blinding or distorting the mental vision—false notions and prejudices which the mind must be delivered and cleansed, so that the student of philosophy may become like a little child. One must become such by renouncing idols.

Having now gone through the more
tion of the book, a more cursory survey of
will be sufficient. Instead of an anal-
aphorism, we shall notice only those that
portant or remarkable.

From the Spectres of the mind the author
those depraved methods of reasoning by which
they are supported and defended. There
he observes, and as many vices or errors, is
universally employed in deducing axioms
from things and perceptions. First, the
the sense itself are deceptive. Secondly, re-
ceptions are erroneously abstracted from
of the senses. Thirdly, the induction
which determines the principles of science
simple enumeration of facts, without the
the proper exclusions and solutions, or
nature. Lastly, the method of discovering
according to which the more general principles
established, and then intermediate axioms
them and tested, is the mother of errors in
all the sciences. Then come the follow-
ing the 70th, 71st, 72nd, and 73rd,

which are translated by Mr. Gifford.

ing the endeavour. Or if, with more gravity, and fixedness, they gird themselves to experiment, they yet bestow their labour in digging and turning over some one experience; as Gilbert in the loadstone, the chemists in gold. Now, this men do with a purpose and direction not less unskilled than futile. For no one explores the nature of anything with felicity in the thing itself; but the inquiry is to be enlarged to what are more general.

Or, even if they do endeavour at a sort of science and positive doctrine from experiments; yet, almost in every case, through an over-hasty and untimely eagerness, they turn aside to practical application of them; not only because of the profit and fruit of such practice, but that in some new work they may as it were, snatch a pledge to themselves, that they are about to be not unprofitably employed in the rest; and also recommend themselves to others,* for the purchase of a better repute concerning those things in which they are engaged. Thus it happens that in the manner of Atalanta, they go aside to take up the golden apple; but in doing so interrupt the course, and let victory slip from their hands. Whereas, in the true lists of experiment, and carrying it forward to production of new works, the divine wisdom and order are, by all means, to be taken for the pattern. But, on the first day of the creation, God created light only, and to that work allotted the entire day; nor created on that day any materiate work. In like manner, and by experiments in every kind, the discovery of causes and true axioms is first to be elicited; and experiments of light, not of fruit, to be inquired. Axioms again, when rightly deduced and constituted, supply uses of practice, not straitened or scantily, but in numbers; and draw after them bands and troops of works. But of the ways of experimenting, which not less than the ways of judging, are blocked up and intercluded, we shall discourse afterwards; having, for the present, only spoken of the common experience as of a faulty demonstration. And now the order of things requires, that we subjoin somewhat concerning those signs (or indications) which we mentioned a little before, (of distemperature in the received philosophies and contemplations) and concerning the causes of a thing at first view so surprising and incredible. For the cognizance of signs prepares assent, but the explication of causes removes wonder. Which two conduce

* The Latin is "*aliis se venditent.*" Mr. Glassford has, strangely, "*insinuate themselves with others.*"

greatly towards the more easy and mild extirpation of speed from the intellect.

71. The learning which we have has flowed principally from the Greeks. For what things the Roman writers, or the Arabians, the more recent have added, are† not much, nor of great weight, and, whatsoever they be, are grounded on the platform of what was discovered by the Greeks. But the wisdom of the Greeks was showy, and wasted on disputations, which kind is most adverse to the acquisition of truth. And, therefore, that name of sophists, which by those who would have themselves be accounted philosophers, was in way of contempt referred back, and turned against the ancient rhetoricians, Gorgias, Protagoras, Hippias, and Polus, is truly proper to the whole kind. Plato, Aristotle, Zeno, Epicurus, Theophrastus, and the professors, Chrysippus, Carneades, and the rest. There was this difference, that the former kind was unsettled and itinerary, strolling round countries, and making show of their wisdom, and exacting a price, but the other, more stated and generous, being such as had their fixed seats, and opened their schools, and philosophized gratis. However, both kinds (the other wise unlike) were professory, and carried the matter to controversies, and established and fought for certain sects and heresies of philosophy, so that this learning was nearly (as Dionysius not ill said upon Plato) “the talk of idle children to ignorant young ones.” But those more ancient of the Greeks, Empedocles, Anaxagoras, Leucippus, Democritus, Parmenides, Heraclitus, Xenophanes, Philolaus, and the rest, (Pythagoras we pass over as superstitious,) opened not schools (that we know,) but betook themselves to the inquiry of truth with greater silence, and more severely and simply, than with a lesser affectation and ostentation. And herein was the carriage, too, in our judgment, more commendable, if their works had not, through tract of time, been put out by the lighter, which are more answering and agreeable to the vulgar apprehension and liking, time (like a river) carrying down what things are lighter and more blown, and growing heavier and solid. Yet neither were they altogether exempt from the vice of the nation and the country, for they leaned too much towards the ambition and vanity of building up, and catching the popular breath. But the inquiry of truth may be set down for desperate when it turns aside to so worth

† Mr. Glasford has idols.

† Mr. Glasford has “what the Roman—is not much.”

Neither is that sentence to be forgotten, or presage raised by the Egyptian priest concerning the Greeks, "that they are ever children, without either antiquity of knowledge, or ledge of antiquity." And certainly they have that proof of children, that they are ready to prate, but unable to state; for their wisdom seems wordy, and barren of works. Signs, then, taken from the rise and family of the philosophy in use, are not good.

Nor are the signs much better which may be taken from the nature of the time and age, than those other from the nature of the place and nation. For the information during the age, whether in regard of time or of the globe, was coarse and slender; which is by far the greatest evil, especially those who rest all upon experience. For neither had they the history of a thousand years, which was deserving the name of history, but fables and rumours of antiquity. And of the customs and tracts of the world they had acquaintance with a little part; calling, without distinction, all the northerners, Scythians; all the westerns, Celts: knew nothing in Africa beyond the hithermost part of Ethiopia; nothing in Asia beyond the Ganges; much less had knowledge of the progress of the New World even by report, or any certain and constant fame: nay, more, very many climates and zones, where the people breathe and live, were* by them pronounced uninhabitable; yea, further, the peregrinations of Democritus, Plato, and Pythagoras, not distant assuredly, but rather distant, were* voiced as something great. But in our times, very many parts of the New World, and the extremes on the one side of the Old, are come to be well known, and the number of experiments infinitely grown. Wherefore, if signs are taken (after the manner of astrologers) from the time of the birth or birth, nothing great seems to be signified concerning philosophies.

Among signs, none is more certain or noble than that which comes from fruits. For fruits and invented works are, as it were, signs and sureties for the truth of philosophy. Now, from the fruits and philosophies of the Greeks, and their derivations through the liberal sciences, for periods now of so many years, hardly an experiment can be adduced which tends to the relief and improvement of man's estate, and may truly be reported as due to the speculations and opinions of philosophy. And Celsus inquisitively and wisely confesses it; namely, that experiments in medicine were found in the first place, and afterwards men

* *Mr. Glassford* has "are" in both these cases.

philosophized about them, and hunted out and assigned causes, not falling out by the inverse order, that from metaphy. and a knowledge of causes, the experiments they were discovered or fetched. Accordingly, it is not wondered, that among the Egyptians (who allowed sacrifices of things divinity and consecration) were judges of brute animals than of men; seeing that brutes, by natural instincts, have given birth to many discoveries, where men by discourses and conclusions of reason, have had few or none.

The industry of the chemists, indeed, has brought some, but, as it were, casually, and in passage; or by what varying their experiments, (as the mechanicks want, not out of any art or theory: for that which they framed disturbs experiment more than assists. Of again, who have been occupied in natural magic, as if it, few inventions are found, and these trivial, and imposture. Wherefore, as it is a caution given* in religion to be shown by works, the same is excellently true likewise, to philosophy; that it be judged by its fruits, sterile be counted vain; and the more so if, in place of the grape and olive, it produces but thistles and disputations and strife.

Other signs are mentioned in subsequent aphorisms the want of growth or increase from the received of philosophy, the confession of their insufficiency, unproductiveness by their authors and teachers themselves, the great disagreement and dissension among philosophers. Even the supposed unanimous accord men with the philosophy of Aristotle Bacon mentions to be fallacious; inasmuch as, first, for ages after Aristotle other systems still had their adherents, till all human learning suffered shipwreck in the introduction of the barbarians upon the Roman Empire, only the philosophies of Aristotle and Plato were preserved upon waves of time, like planks made of a lighter and solid material, secondly, such general acquiescence there was, being founded not upon investigation and convictions of the reason, but upon prejudice and authority of others, was mere obsequiousness and concurrence rather than unanimity.

* Mr. Glenford has "as it is continued."

subject of the causes of errors in philosophy, and of continuance in them for so many ages, is now taken and is considered in the fifteen aphorisms from the 1st to the 92nd inclusive. First, out of twenty-five centuries which might be reckoned to have elapsed since commencement of civilization, scarcely six could be reckoned as having been times in which learning flourished. Secondly, even in those times, natural philosophy, which was accounted the great mother of the sciences, had received a very small part of the attention and the labours of man. In modern times theology, in the Greek and Roman times ethics and politics, had been the chief subject of study. Those, besides, who did apply themselves to natural philosophy had seldom given themselves up to it exclusively, or made it a principal object. It had rather made a passage and bridge to other things; that great mother of the sciences, by an amazing utility, had been thrust down to the offices of a handmaid to attend upon the operations of medicine or mathematics. Another powerful cause had been that the true goal and mate object of science had never been properly fixed. The goal is nothing else than that human life may be enriched with new inventions and riches; but the use commonly made of philosophy had hitherto been merely to contribute to a professorial purpose (to the embellishment of a lecture), or to the gain or reputation of the individual philosopher. And, if men had not rightly fixed their goal, how could they rightly chosen their way or method of scientific investigation. The method commonly followed had been for any one who applied himself to the work of philosophy first to inquire and find out whatever had been said about the matter by others; then to add his own opinion upon it, and by much mental agitation to defend, and, as it were, invoke his own spirit to declare in its oracles; all which was a proceeding entirely without foundation, and turning only upon opinions. A philosopher perhaps might call in logic to his assistance; that is called invention in logic is not of principles leading axioms, upon which the arts are established, but only of things that seem agreeable to such principles.

or axioms. And as for the experience of which some availed themselves—denominated chance when it fallen in with, experiment when sought out—it laid nothing but a loose broom (*scopie dissolutor*), speak, and a mere groping such as men take to it in the night, trying everything if perchance they may discover the right way, whereas it would be much better wiser either to wait for day, or to kindle a light and to proceed on their way. The true order of experiments first kindles a light, and then by that light shows the way, beginning with an orderly and well digested, and not a preposterous or erratic course of experimenting, thence deducing axioms, and again from the established axioms new experiments, seeing that not even the divine word operated upon the mass of things without order.

Another source of mischief had been the opinion, now inveterate, though empty and pernicious, imagining that the dignity of the human mind is lowered by being long and much engaged with experiments and particular facts, which are subjected to the senses and confined to matter. And then follow the 84th and 85th Aphorisms, which Mr. Glassford thus translates.

84 Again, men have been stayed and almost enchanted by a progress in knowledge by a reverence of antiquity, and a liberty of men who are of great account in philosophy in consequent consent with them. And of consent we have spoken above.

But for antiquity, the opinion which men cherish conceives it is altogether negligent, and scarcely congruous even to the name. For the old age and gravity of the world are truly counted as antiquity, which are properly to be ascribed to our times, not to the younger age of the world, such as we have with the ancients. Since that age, in respect to us, indeed is older* and greater, but in respect to the world itself was and is lesser. And, in reality, as we look for a greater acquaintance with human affairs, and a more mature judgment,† from an old than from a young man, on account of his exper-

* Mr. Glassford has "is, in respect to us, indeed, and is."

† Mr. Glassford has "maturity of judgment."

‡ Mr. Glassford has "of experience."

and the variety and abundance of the things which he has seen, and heard, and considered, just so it is fit, also, that much greater things be expected from our age (if it knew its strength, and would endeavour and apply) than from the old times; as being a more advanced age of the world, and enlarged and accumulate with numberless experience and observations.

Neither is it to be accounted for nothing, that, through distant navigations and peregrinations (which in our times have become so frequent), very many things in nature have been laid open and discovered, by which new light may be cast upon philosophy. Nay, it would be disgraceful to men, if tracts of the material globes (that is, of countries, and seas, and stars) were in our times immeasurably disclosed and illustrated, but* the boundaries of the intellectual globe were confined within the discoveries and straits of the ancients.†

Then, as touching authorities, it is the greatest pusillanimity to defer infinitely to authors, and yet from Time, the author of these, and so of all authority, to withhold his due. For Truth is rightly said to be the daughter of Time, not of authority. Thus it is no wonder if these spells of antiquity, authority, and consent have so tied the faculties of men, that (like those maleficate and bewitched) they may not hold converse with things themselves.

85. Nor is it only the admiration of antiquity, and authority, and agreement, which has constrained the industry of men to rest in what has been already discovered, but an admiration also of the works themselves which have already been furnished in abundance to mankind. For if any shall bring under his review the variety of things, and that most beautiful apparatus which by the mechanic arts has been collected and introduced for man's use and adornment, he will certainly incline coming over to an admiration rather of the wealth of humanity‡ than to a sense of its poverty; not at all adverting, that the earliest observations of man, and works of nature (which are like the soul and first motive to all that variety), are neither many, nor drawn from any depth; all the rest belonging§ only to men's perseverance, and the subtile and ordered motion of the hand or of

* Mr. Glassford has "yet."

† Mr. Glassford has "of the old" (with what intended meaning we do not understand). The Latin (*veterum*) is quite clear.

‡ Mr. Glassford has "of human wealth."

§ *Pertinere*.—Mr. Glassford has "having relation."

instruments. Thus (for an example the making of horologes) is truly a subtle and accurate thing, such, namely, as wheels appears to copy the celestials, in its successive and regulated movement the pulse of animals, which thing wholly depends on one or two axioms† of nature.

And, again, if one contemplates that subtilty which belongeth to the liberal arts, or should even look to that which regardeth the preparation of natural bodies by the mechanic arts, either such things,‡ as the discovery of the celestial motions in astronomy: of concords in music; of the letters of the alphabet§ in grammar (which even yet are not used in the kingdom of the Chinese), or again, in mechanics, of the works of Bacchus and Ceres, that is the preparation of wine and beer, the making of breads, or even the delicacies of the table, and distillations, and the like; if he also considers himself, and turns in his mind, through what revolutions of times these things have been advanced to the culture in which we now have them (for these all are ancient except distillation) and as already noted of horologies, how little they hold of observations and axioms of nature, and how easily, and as it were by occasions presented, and incidental¶ observations, these may be discovered; he will, I say) readily throw off all weariness and rather compassionate the human condition, that for so many ages there should have been such a penury and barrenness of things and inventions. And yet these very inventions which we now made mention, were ancienter than philosophy and the intellectual arts; so much (if the truth may be spoken), that, when these reasonings and dogmatical learnings came in, the invention of useful works ended.

Or if any one should turn from the workshops to the libraries, and hold in admiration the immense variety which was not of books, when he has examined, and looked more into the matters and contents of the books themselves, he will assuredly be filled with an opposite amuzement: and after he shall

* Mr. Glassford here inserts "clocks and other," for which there is nothing in the Latin.

† *Ex uno aut altero naturæ axiomate.* Mr. Glassford has "on one or another axiom."

‡ Mr. Glassford has "other such."

§ Mr. Glassford has "the alphabet letters."

|| Mr. Glassford has "mechanicals."

¶ *Incurrentes.*—Mr. Glassford has "concurrent."

en how endless are the repetitions, and that men act and speak still the same things, he will pass from admiration of the variety to astonishment at the indigence and paucity of those things which have hitherto detained and occupied the intellects of men.

Or, if one shall let down his mind to the contemplation of what things are esteemed rather curious than sound, and shall look more inwardly to the works of the alchemists or magicians, he will doubt perhaps whether they are more deserving of laughter or of tears. For the alchemist nurses an eternal hope, and, when the affair succeeds not, impeaches rather his own mistakes, revolving in self-accusation how he has not sufficiently understood the terms either of the art,* or of the authors, and therefore applies his mind to traditions and auricular whispers; or that he has tripped something in scruples and moments of his practice, and therefore repeats his experiments without end; and meanwhile, as among the dies of experiment he lights upon some, either new in their very feature, or for some usefulness not to be slighted, with such pledges he feeds his mind, and these he most upholds and celebrates; the rest he keeps alive by hope. And yet it is not to be denied that the alchemists have discovered not a few things, and endowed men with profitable inventions. However, that fable squares not ill with them, of the old man who left to his sons gold buried under round in his vineyard (but pretending ignorance of the spot); therefore they diligently applied themselves in digging the vineyard, and no gold indeed was found, but the vintage was made richer by the culture.

But the cultivators of natural magic, who explain everything † by sympathies and antipathies of things, have, through idle and most supine conjectures, affixed to things wonderful virtues and operations; and if they have, at any time, exhibited works, they are such as suit to admiration and novelty, not to fruit and usefulness.

Again, in the superstitious magic (if we must speak even of this), it is to be specially observed ‡ that the subjects are of some fixed and determined sort only, in which the curious and superstitious arts, throughout all nations and ages and men religions, have had any power or have amused them-

* Mr. Glassford has "either not . . . the terms of the art."

† Mr. Glassford has "rid all."

‡ "Adverted" is Mr. Glassford's word.

themselves.* Let these accordingly be dismissed. Meaning it is nothing strange if opinion of plenty has been a reason for scarceness.

The improvement of philosophy, the author goes on to argue, had been further prevented by the craft of the professors and teachers of the sciences, who, by the method of an all-comprehensive arrangement and systematic divisions, had been accustomed to hold them forth as already perfected and carried out to the utmost possible completeness. The first investigators of truth, on the contrary, had been contented to throw the knowledge they gained from the contemplation of nature into aphorisms, or brief, unconnected sentences, and never pretended to embrace an entire art. Then, still further to confirm the ascendancy of the ancient systems, there had been the variety and levity of many of their opponents, the proposers of new methods or theories, the empty and fantastic boasters who had loaded mankind with promises of the prolongation of life, the retardation of old age, the alleviation of pain, the reparation of natural defects, the deception of the senses, the restraint and excitement of the passions, the illumination and exaltation of the intellectual faculties, the transmutation of substances, the augmentation to any degree of the force and velocity of motion, the effecting of impressions upon the changes of the air, the deduction and appropriation of celestial influences, the divination of the future, the exhibition of the distant, the revelation of the hidden, and many more such things. Still more had men been kept back from the discovery of real and great truths by their own pusillanimity, and the smallness and insignificance of the tasks or objects which they had been wont to propose to themselves in the cultivation of the sciences. The consequence of this had been, that the weakness of the arts had been turned into a calumny upon nature.

* Mr. Glassford has "have exercised any influence or opinion." But, besides that to exercise a delusion is hard English, that is not the meaning of the Latin, "*in quibus liquor potuerint aut luserint.*"

and whatever human skill had failed in accomplishing had been pronounced to be impossible. If enquirers, instead of each confining his attention to one particular art, had extended their examination throughout the general realm of nature, they would have found that what was obscure in one department was manifest and familiar in another. Another impediment to the progress of natural philosophy in every age had been superstition, and a blind and immoderate zeal for religion. Even in his own day, Bacon complains, the discussion of the facts and laws of nature had been made more difficult and perilous by the summaries and methods of the scholastic theologians, who, after having reduced divinity, as far as they could, into order and the form of an art, had mingled with the body of religious truth much more than was necessary of the pugnacious and thorny philosophy of Aristotle. Others, again, though in a different way, had done equal injury to both Christianity and philosophy by attempting to deduce and confirm the truths of religion out of the principles and the authority of philosophers. The various ways in which almost all access to philosophy was intercepted by the ignorance of divines are thus enumerated. Some were afraid that an inquisition into nature might penetrate beyond the established bounds of sobriety. Others thought that, if intermediate or secondary causes remained unknown, every thing would be more readily referred (as they conceived religion required) to the actual hand and directing wand of God; which, says Bacon, is nothing else than to wish to gratify God with a lie.* Others were afraid lest movement and change, once begun, in philosophy, should pass thence to religion. Others finally seemed to be anxious lest something should be found in the investigation of nature which might subvert or at least shake

* In the original, "quam Deo per mendacium gratificari velle." Mr. Wood erroneously translates, "that God wishes to be gratified by means of falsehood." Nor does his rendering of the next sentence give exactly Bacon's meaning;—"but motion and change in philosophy should terminate in an attack upon religion."

dig on, especially among the unlearned. But these first apprehensions, Bacon declares, seem to him to satisfy wholly of animal wisdom as if men in the recesses of secret thoughts of their minds were really diffident and doubtful about the strength of religion and the dominion of faith over the senses. He who truly considers the matter will perceive that natural philosophy is, after the word of God, the surest medicine against superstition and the best minister of faith. The 90th aphorism translated by Mr Wood, is as follows: -

90. Again, in the habits and regulations of schools, universities, and the like assemblies, destined for the abode of learning, and the improvement of learning, everything is found to be opposed to the progress of the sciences. For the lectures and exercises are so ordered, that anything out of the common track can scarcely enter the thoughts and contemplations of the mind. If, however, one or two have perhaps dared to take their liberty, they can only impose the labour on themselves without deriving any advantage from the association of others, and if they put up with this, they will find their industry a sort of no slight disadvantage to them in making the fortune. For the pursuits of men in such situations are, as were, chained down to the writings of particular authors, and any one dare to dissent from them, he is immediately attacked by a turbulent and revolutionary spirit. Yet how great is the difference between civil matters and the arts; for there is the same danger from new activity and new light. In civil matters even a change for the better is suspected on account of commotion it occasions: for civil government is supported by authority, unanimity, fame, and public opinion, and not by demonstration. In the arts and sciences, on the contrary, every participant should reason, as in unities, with new words and advances. And this is the rational, though not the actual, law of the case: for that administration and government of science we have spoken of is wont too rigorously to repress growth.

In the 91st aphorism the want of proper rewards for the cultivation of science is complained of. And here the 92nd, also in Mr. Wood's version: -

92. But by far the greatest obstacle to the advancement

ences and the undertaking of any new attempt or deed is to be found in men's despair and the idea of impossibility. For men of a prudent and exact turn of thought, together diffident in matters of this nature, considering curiety of nature, the shortness of life, the deception of senses, and weakness of the judgment. They think thereat in the revolutions of ages and of the world there are floods and ebbs of the sciences, and that they grow and at one time and wither and fall off at another, that, they have attained a certain degree and condition, they proceed no further.

Therefore any one believe or promise greater things, they put it to an uncurbed and immature mind, and imagine which efforts begin pleasantly, then become laborious, and in confusion. And, since such thoughts easily enter the heads of men of dignity and excellent judgment, we must take heed lest we should be captivated by our affection to an excellent and most beautiful object, and relax or diminish the severity of our judgment; and we must diligently observe what gleam of hope shines upon us, and in what direction it manifests itself, so that banishing her lighter dreams we discuss and weigh whatever appears of more sound importance. We must consult the prudence of ordinary life too, which is diffident upon principle,* and in all human matters chooses the worst. Let us then speak of hope, especially as we are vain promisers, nor are willing to force or ensnare men's consent, but would rather lead them willingly forward. And, though we shall employ the most cogent means of enforcing them when we bring them to particulars, and especially those which are digested and arranged in our Tables of Invention, (the subject partly of the Second but principally of the Fourth of the Instauration), which are indeed rather the very substance of our hopes than hope itself; yet to proceed more leisurely we must treat of the preparation of men's minds, of the manifestation of hope forms no slight part. For it is not all that we have said tends rather to produce a discontent than to encourage activity or quicken the industry of the mind, by causing them to have a worse and more conscious opinion of things as they are than they now entertain, so that they perceive and feel more thoroughly their unfortunate condition. We must therefore disclose and prefix our reasons

Rather upon rule. The Latin is "ex præscripto."

not thinking the hope of success improbable ; as Columbus before his wonderful voyage over the Atlantic gave birth to his conviction that new lands and continents might be discovered besides those already known. And these reasons, though first rejected, were yet proved by subsequent experience, to be the causes and beginnings of the greatest events.

The exposition of the grounds of hope for the future progress of philosophy occupies a number of subsequent aphorisms. Some religious considerations are first created, as, that God is the author of good and the father of light ; that, as it is said in regard to spiritual things that the kingdom of heaven cometh not with observation, so in every more considerable work of providence progress is made imperceptibly, and from the smallest beginnings, and that the prophet Daniel declared that in the last days of the world many shall run to and fro and knowledge shall be increased. It is then remarked that even the errors and failures of the present afford hope for the future and encouragement for the trial of methods as yet unattempted. So Demosthenes argued, in his famous exhortation to the Athenians, that what which was worst in the past, their ill management of the war with Philip and their consequent misfortune was the very thing which chiefly entitled them to expect better success in the time to come, when they should have changed their system and corrected their errors. This remark introduces a more distinct or precise statement of the wrong courses that had been hitherto taken in the study of philosophy. Here is the 95th aphorism as it is given by Shaw : —

95. Those who have treated the sciences were either empiricists or rationalists. The empirics, like ants, only lay up stores, and use them ; the rationalists, like spiders, spin webs out of their own selves — but the bee takes a middle course, gathering her matter from the flowers of the field and garden, and digesting and transforming it by her native powers. In like manner, that is the office and work of philosophy — which, not trusting too much to the faculties of the mind, does not lay up the matter, afforded by natural history and mechanical experience, entire or unaltered in the memory, but treasures it after being first

borated and digested in the understanding. And, therefore, we have a good ground of hope, from the close and strict union of the experimental and rational faculty, which have not hitherto been united.

In the 96th aphorism it is observed that natural philosophy has never yet been found simple and pure, but always infected and corrupted by some foreign intermixture; as in the school of Aristotle by logic, in that of the later Platonists by mathematics. In the 97th it is added that no one has yet been found of sufficient constancy and firmness of mind to determine altogether to throw away common theories and notions, and to apply his understanding afresh to the examination of particular facts when it has been thus smoothed and made even. As Livy says of Alexander the Great that all he had done was only that he had judiciously dared to despise imaginary difficulties, so Bacon conceives that future times will say of him that he had achieved nothing very great, but had only looked upon some obstacles as of small account which were usually regarded as formidable. The 98th aphorism, as translated by Shaw, is as follows:—

And for the foundations of experience, which is the next thing we must proceed to, they either have not hitherto been laid, or very weakly. Nor has a collection of materials, competent either in number, kind, or certainty, for informing the understanding, or any way sufficient, and worthy of the end proposed, been hitherto made; but, on the contrary, learned men, after an easy, indolent manner, have received certain rumours of experience, and the popular reports and tales thereof, both for building and strengthening their philosophy and given them the weight of strong testimonials; which is just as if a kingdom should govern itself, not according to the advices and intelligences of its ambassadors, and trusty officers in foreign courts, but by the idle rumours and common town-talk of its people. For as to matter of experience, there is nothing hitherto well discovered, verified, adjusted, weighed, or measured in natural history, but whatever is undefined and vague in observation must needs be fallacious and deceitful in the information. And if this shall seem surprising, or the complaint appear unjust to any one, whilst so great a philosophy as Aristotle, assisted with the purse of so great a prince as A

der, has compiled such an exact history of animals, whilst some others, with greater diligence, though with less art, have contributed many things thereto, and writers again have written copious histories, and accounts of plants, metals, and fossils, he does not seem sufficiently to understand our meaning. A natural history, compiled for its own sake, is one thing, and a natural history, collected for forming the understanding, in order to the building up of natural philosophy, is another. And these two histories, they differ in other respects, so principally in this, that the former contains various descriptions of natural bodies, and experiments of mechanic arts. For as, in civil life, the temper of a man, and the secret dispositions of his mind and affections are better understood, when he is ruffled, than otherwise; so the secrets of nature are better got out by the torturing of a man when suffered to take their own course. And, therefore, we may then have good hopes of natural philosophy, when natural history, which is the basis thereof, shall be better studied, and not before.

Even in the plenty of mechanical experiments, Bacon proceeds to observe, there is a great scarcity of such as most help to inform the understanding; the mechanic seldom applying his mind or his hand to any other thing than those which are of service to his work. Then only we think, may a hope be reasonably entertained of the further progress of the sciences when there shall be collected into a natural history many experiments which are of no use in themselves, but contribute only to the recovery of causes and axioms; experiments which are accustomed to call *light-bearing*, in contradistinction to others which may be called *fruit-bearing*. A different method, order, and manner of process must also be introduced. Then the experiments must be carefully recorded, and arranged tables must be formed of observed facts appertaining to the subject of investigation. But even after this has been done the mind must not pass immediately to the inquisition or discovery of new particulars or effects; results of any importance are only to be looked for from the new light of axioms deduced by a certain method and rule from the particulars first collected, and then employed to indicate

out new particulars. Nor must the mind leap fly at once from particulars to the most general is, such as what are called the principles of arts and ngs. Then only can there be hope for the sciences , by a true ladder, and steps not intermitted or en off from one another, but continuous, an ascent be made from particulars to minor axioms, thence ermediate, one rising above another, thence lastly e most general. It is the intermediate that are the solid, and living axioms, upon which the affairs and ortunes of the human race rest. It is not wings, ather lead and weights ("non plumae, sed plumbum s et pondera"), that the human understanding ; something to restrain its tendency to leap and . once from particular facts to universal principles. stablishing axioms a form of induction different from heretofore in use must be employed; an induction h shall separate nature by means of proper rejec- and exclusions, and then shall after a sufficient er of negatives arrive at its affirmative conclusions. men must avail themselves of the aid of this kind of etion, not only for the discovery of axioms, but for lefinition of notions or conceptions. Every axiom obtained must be considered in reference to whether itted only for those particular facts from which it is acted, or whether it be of greater extent and rality. And, as has been before said, in order to it any hope of progress, all separation and dismem- ent of the sciences must be prevented by the ex- on of natural philosophy, and the reduction of par- ur sciences to that one.

esides these grounds of hope for the future, derived from the errors and failures of the past, it is also to nsidered that, if many useful things have been found by men as it were by chance, when they were not ing for them but were engaged about other matters, r more such must surely be discovered when they expressly apply themselves to the search, and shall ecute it after a certain method and order, not desul- y and on the mere impulse of the moment. The

Following is the 109th aphorism, as translated by Mr. Glassford. -

109 Even that, likewise, may be drawn into matter of hope, that, of the very things which have already been discovered, some are of such a kind, that before they were discovered, could not easily have come into the mind of any one to suspect or conjecture concerning them, but one should at once have counted them as plainly impossible. For men are used to prognosticate new things after the pattern of the old, and according to imagination prejudiced and tainted by them, which kind of anticipation is most deceitful, since much of what is derived from the fountains of things flows not in the accustomed rill.

As if, before the discovery of cannon, one should have marvelled the thing by its effects, and talked of it after the manner, that a certain invention had been disclosed, by which walls and the strongest fortresses might, from a long reach, be shaken and cast down, undoubtedly men would† have themselves tormented much and variously about the powers of engines and mechanic contrivances, to be multiplied by weights and wheels, and such like orietations, and impulses; but, as if, when the air, so suddenly and violently expanding itself, and flowing forth, scarcely any thing would ever have occurred to the imagination or conceit of any one; being a thing he had no example of at hand, save, perhaps, in earthquakes, and thunder, which, as *magnalia* (or greater works) of nature, and not imitable by man, men would straightway have rejected.

In the same way if, before discovery of the silk yarn, one should have thrown out language of this sort; that a certain kind of thread was discovered, for use of garments and furniture, which far exceeded linen or woollen thread in fineness and, nevertheless, in tenacity, and in beauty too, and softness, men would† have straight imagined something about a species of vegetable cotton, or about the more delicate hairs of some animal, or about feathers and down of birds, or about the spinings of a puny worm, and these so copious, so renewed, and annual, assuredly they would have conjectured nothing. Nay, if one had even dropped a word concerning a worm, doubtless he had been mocked as a dreamer, who dreamed new labours of the spider.

* Mr. Glassford has "drawn to hope."

† Mr. Glassford has "should."

In like manner, if, before discovery of the mariner's needle, some one should have broached a discourse of this nature; that a certain instrument was invented, by which the poles and points of the heavens might be accurately taken and discerned; men would* immediately, through the workings of fancy, have pursued many and diverse cogitations regarding the more exquisite construction of astronomical instruments; but that anything could have been found whose motion should so well sort with the celestials, and yet itself should not be of the celestials, but a stony or metallic substance merely, would have appeared utterly incredible. And yet these, and like things, did escape the notice of men through so many ages of the world, and have been discovered, not by philosophy or art and skill of reasoning, but through some fortuitous and favouring occurrence; and are, as we said before, of such a kind as are plainly heterogeneous, and the most remote from things antecedently known, so that no preconceit could at all, or in any way, have led to them.

There is all reason, therefore, to hope, that in the lap of nature are many things of excellent use still hidden, which have no kindred or parallelism with those hitherto discovered, but are altogether placed without the roads of the fancy; which, in any case, are yet undiscovered; which, beyond doubt, in many turns and circuits of ages, will sometime also themselves come forth, as those former did come; but, by the way which we now treat, may speedily, and suddenly, and together, be presented to the view, and anticipated.

There are some other inventions, Bacon then observes, which are of such a kind as to show that men may pass by or step over the noblest discoveries, even when lying as it were at their feet; and he gives as an instance the art of printing. At first it seems incredible to us that a particular thing should ever be found out; and then, after it has been found out, equally incredible that it should have so long remained undiscovered.

Let men consider, too, what infinite expenditure of talent, time, and means they bestow upon things and studies of comparatively little use and value; a very small part of which, if it were directed to what is sound and solid, would overcome any difficulty. And in the

* *Mr. Glassford* has "should."

mean time let no one be scared by the multitude of peculiar facts, but rather take encouragement from every circumstance, seeing that the particular phenomena of the arts and of nature are a mere handful compared to the fictions of the imagination, disjoined and abstracted from the evidence of things. If we had but any one hand, says Bacon, who would answer our interrogations respecting the realities of nature,* the discovery of causes and of all sciences would be the work of only a few years. And then he brings forward his own example in the 113th aphorism, which may be literally translated thus. -

We even think that something of hope may be supplied man from our own example; nor do we say this in the way of boasting, but because it may be useful to say it. If any be distrustful, let them consider me, a man, among the men of my age the most occupied with civil affairs, of somewhat firm health (which occasions much loss of time), and in matters clearly a first adventurer, following the steps of no one, nor even looking for communication respecting these things to any mortal, and who yet, having entered firmly upon the road, and submitting my understanding to things, have, conceive, carried forward these things somewhat; and that they consider what may be expected, after these indications, from men abounding in leisure, and from associated labours, and from a succession of ages; especially in a way which is not pervious only to single travellers (as is the case with that logical way), but where men's labours and works, especially in so far as regards the collecting of experience, may be in the best manner both distributed and afterwards combined. For then will men begin to know their strength, when not a few lumberers shall undertake the same thing, but some one thing and some another.

Finally, he urges, even if the breeze of hope breathed from *that new continent* were much fainter and more doubtful than it is, it would be the wiser and in every way the better course to make the trial. The gain

* This, we apprehend, must be the meaning of "*quis de futuris naturæ ad interrogata responderet*;" not "who could actually answer our interrogations of nature," as Mr. Wood translates the passage.

trying might be a great good ; the result of failure would only be the loss of a little human labour.

Here then he closes what he calls the demolishing part (*pars destruens*) of the *Instauration*, consisting of three confutations ; the confutation of the natural human reason when left to itself ; of the established mode of demonstration ; and of the received theories or philosophical systems. One thing only remains to be done, before proceeding to expound the true art and rule of interpreting nature. The purpose of this First Book is to prepare the minds of men for understanding as well as for admitting what is to follow ; accordingly, the surface of the mind having been now cleansed, and polished, and made even, the mind ought next to be placed in a good position, and, as it were, in a benevolent aspect, in regard to the truths that are to be proposed for its acceptance. The remaining aphorisms, therefore, from the 116th inclusive to the 130th or last, are employed by Bacon in prepossessing the reader with a favourable opinion of the new method of philosophy, although, as he expresses it, only for the mean time, and by way of interest, until the thing itself be explained.

He begins by disclaiming any design or desire of founding a sect, or even of proposing any particular systematic view of nature, although upon some particular points he conceives that he holds truer, more certain, and more productive opinions than those commonly entertained, as may appear from what will be found collected in the Fifth Book of the *Instauration*. He does not think that the time is yet arrived for any universal theory ; and he has no hope even of being able to complete the Sixth and last Part of the *Instauration* (which is intended for the exposition of a philosophy discovered by means of the legitimate interpretation of nature). His purpose is solely to try whether he cannot establish the power and greatness of men upon a firmer foundation, and extend the boundaries of their sway ; and for the present he will be satisfied if he can only sow the seeds of a purer truth for posterity, and make a commencement of the great work.

Neither does he offer or promise particular effects although in his Tables of Invention (forming the Fourth Part of the *Instauratio*), and also in many particular instances (I brought forward in the Second Part), and above all in his observations on the history of nature (in the Third Part), many indications and designations of new effects may be noted by any one of ordinary perspicuity and skill. But his main purpose is, as he has repeatedly declared, to extract, not effects from effects, or experiments from experiments (as the empirics do), but from effects and experiments causes and axioms, and from causes and axioms new effects and experiments, in the character of a legitimate interpreter of nature. And thus he adds, contending for greater things, he condemns all hasty and premature delay upon particular experiments, however promising, as (to use a favourite illustration of his) a running after the apples of Atalanta. He does not childishly aspire after golden apples, but bends all his efforts to make the course of art victorious over nature,* nor is he in haste to reap moss or the green blade, but is contented to wait for the harvest in its due season.

Carefully as his natural history and tables of invention have been compiled, he admits that some things insufficiently ascertained, and other things quite false, may possibly be found in them; but this is of no more consequence than is the wrong placing of a letter here or there in writing or printing. Nor is it any reasonable objection, but the contrary, that many things in the history and the experiments may be, some light and common, some mean and illiberal, some subtle and merely speculative, and, as it were, of no use. Important truths are often to be gathered from the commonest facts, and even the meanest things are, as much as the loftiest and most splendid, a portion of the universe. The following is the 121st Aphorism, as Mr. Glassford has translated it:

* In the original—"Sed omnia in victoria cursus artis super naturam ponimus." But the expression seems awkward and harsh, and perhaps some in sprint may be suspected.

21. But the next objection* is, on all accounts, to be looked more closely : that many things in our history will, to the vulgar apprehension, or indeed to any intellect accustomed to ancient things, appear of a somewhat curious and unprofitable subtlety. Of this, therefore, first and chiefly, we both have seen, and are to speak. And we do so in this manner : † as yet, in the beginning, and for a long time, we are seeking experiments of *light* only, not experiments of fruit ; after example, as we have frequently remarked, of the divine creation, which, on the first day, produced the light only, and allotted one entire day to that alone, nor on that day mixed light of materiate work.

Therefore, if any should consider such things to be of no use, let him think it to be the same as if he judged also that there is not any use of the light, because, indeed, it is not a solid or materiate substance. And we hesitate not to say, that knowledge of simple natures, if it be well examined and detailed, is truly as the light, giving entrance to the universal essences of works, and, with a sort of power and efficacy, embracing and drawing after it whole bands and troops of works, and opening the fountains of the noblest axioms ; yet in itself of that knowledge of no considerable use. Nay, even the elements of letters, by themselves and separately, signify nothing, and have not any use, yet are they like the first materials ‡ for the composition and garniture of all discourse. Yea, the seeds of natural things, powerful in their possible virtue, as to use except in their growth §) are nothing ; and the dispersed rays of the light itself, unless they concur, impart not their benefit. But if any be offended || by subtleties of speculation, what shall we have to say of the schoolmen who have indulged in subtleties without measure ? Which subtleties, too, were grounded on words, or, at least, on vulgar notions (which is the disease), not on things or nature ; and without profit not only in their beginnings, but even in their consequences ; not being such as have for the present perhaps no utility, but consequently an infinite, like those we speak of. But of this let men be assured, that all subtlety of disputations and reasonings, if

* Mr. Glassford has "the next is."

† Mr. Glassford has "are to speak, in this manner."

‡ Mr. Glassford has "the *materia prima* (or rudiment)."

§ Mr. Glassford has "by their process."

|| Mr. Glassford has "take offence."

it be employed only after invention of axioma, is out of place, and that the true and proper, or at least for subtlety, is in the balancing of experiment, and tutation of axioms therefrom. For that other subtle and catches at nature, but never apprehends or takes her. And that is undoubtedly most true, if transfigure, which they use to say of Cleopatra or fortune, offers a lock in front but behind she is bald."

Finally, as touching this contempt of natural history, either vulgar or base, or ever subtle, and in themselves profitable, let that speech of the poor woman prince, who would have thrown aside her petition as unworthy as I beneath his majesty, be taken for an example, you then give over to be a king." For it is most certain the command over nature may neither be acquired nor tamed, if one will not be at leisure for things of themselves seeming too small and trifling.

Another objection is then answered — the strange and harsh proceeding to put away all and all authorities in a mass, and to strike them were at one blow; no aid nor support being from the ancients. It would not have been, Bacon observes, if he had chosen to act with civility, for him to have referred for the origination of his doctrines either to the early ages or times of the Greeks (when the sciences of nature flourished more perhaps,† though in silence, and had not yet fallen into the troubles of the Greeks), or even (in some parts at least) to some of the Greeks themselves. But to the evidence of facts, he rejects every form of aid and imposture. The discovery of things is to be from the light of nature, not demanded back from the darkness of antiquity. And the universal rejection which he has directed against the existing philosophy.

* Mr. Glassford has "desires." The Latin is *desiderat*.

† The Latin is, — "Cum scientiæ de natura naturæ essent tamen majore cum silentio, dormierint." Mr. Glassford, erroneously, we apprehend,; "Since the sciences of nature flourished more in their natural obscurity."

contends, really more modest than any partial censure would have been; for it implies that men had been misled by erroneous principles of speculation, neglected and passed over facts, than formed a false judgment respecting them. Then he proceeds, as the usage is rendered by Mr. Wood:—

With regard to our presumption, we allow that, if we were to assume a power of drawing a more perfect straight line or circle than any one else by superior steadiness of hand or keenness of eye, it would lead to a comparison of talent; but, we merely assert that he can draw a more perfect line or circle with a ruler or compasses than another can by his unassisted hand or eye, he surely cannot be said to boast of much. Now this applies not only to our first original attempt, but to those who shall hereafter apply themselves to the pursuit. For our method of discovering the sciences almost equals men's wits, and leaves but little to their superiority, since it achieves everything by the most certain rules and demonstrations. Whence (as we have often observed) our attempt can be attributed to fortune rather than talent, and is the offering of time rather than of wit. For a certain sort of chance has no less effect upon our thoughts than on our acts and deeds.

But still another objection may be made:—that the new method sins in the very way in which it charges older systems with being erroneous and defective, namely, not establishing the true and best goal and aim of the sciences; that the contemplation of truth is more dignified and lofty than any utility or greatness of actual effects, and that this long and anxious dwelling upon experience and matter, and the fluctuations of particular facts, must tend to bring the mind to the ground, or rather throw it down into a Tartarus of confusion and perturbation. With this reasoning Bacon professes to agree; but he says that his object is simply to establish in the human understanding a true model of the universe, which can only be done by a diligent dissection and anatomy of nature.

Again, it may be said that he is only doing over again what has been already done; that the ancients, after all, followed the very method which he proposes. He

* Mr. Wood has "merely." The Latin is *mere*.

admits that the ancients probably did collect facts and note them down; but still he contends that their method of reducing general principles was plainly altogether different from his. Their custom was, from certain instances and particulars, with the addition of common notions and perhaps something taken from such of received opinions as had the greatest currency, to force once to the most general conclusions, or to the principles of the sciences; according to the fixed and immutable truth of which they then deduced and proved inferior conclusions by means of intermediate propositions, while any new instances were brought forward which contradicted their dogmas, they subtilly relaxed them to conformity by distinctions, or by explanations of their rules, or got rid of them in some clumsy way by means of exceptions; but at any rate laboriously and perforce accommodated to those their principles the course of all such particular facts as were not manifestly repugnant to them.

In the next aphorism he defends himself against the charge of encouraging scepticism by his demand of a suspension of judgment till general principles have been arrived at by the proper steps; asserting that his object is not to destroy certainty of conviction, but only to produce a wise certainty (*non acutalepsiam, sed eutalepsiam meditanti et proponimus*). In the 127th he declares that his method is intended for the perfection not of natural philosophy alone, but equally of all other sciences, logical, ethical, and political. In the 128th he repeats his assurance that he has no wish to destroy the philosophy, arts, and sciences in common use, appealing to his other writings, and especially his books on the Advancement of Learning, in proof of his good will and friendly disposition towards all the established forms and customary applications of scholarship. And this is the 129th, to avail ourselves once more of Mr. Glasford's version —

129. It remains that we say a few things concerning the excellency of the end. These, if they had been over-

before, might have seemed no better than wishes; but, hope being now raised, and unjust prejudices removed, * may chance to have greater weight. And if we had perfected and fully discharged our task, and were not proceeding to call others to a partnership and union† of labours, we should still have abstained from speech of this kind lest it should be taken for a publishing of our deserts. But since the industry of others is to be sharpened, and their minds provoked and kindled, some things it is convenient to recall to men's recollection.

First, then, the introduction of noble inventions appears to hold by far the foremost place among human actions; and so the early ages determined. For to the inventors of things they ascribed divine honours; but to those who deserved well ‡ in civil matters (such as founders of cities and empires, lawgivers, deliverers of their countries from long calamities, subverters of tyrannies, and others like to these), they adjudged the honours of heroes only. And certainly, if one compares them rightly, he will find this judgment of the old age to be just. For the benefits of inventions may belong to the whole human race, the civil exclusively to certain seats of men; these, again, endure not beyond a few generations; those, as it were, through perpetual times. And the amendments of civil estate proceed, for the most part, not without force and disturbance; but inventions bless and convey their advantages without the hurt or sadness of any one.

Besides, inventions are in a manner new creations, and somehow imitative of the Divine works; as he well sung:—

*Primum frugiferos fœtus mortalibus ægris
Dididerant quondam præstanti nomine Athenæ;
Et recreaverunt vitam, legesque rogarunt.*

(Athens, that name renowned, the first gave birth
To fruitful arts, for labouring man's relief;
And life created new, and founded laws.)

And it seems worthy of note in Solomon, that, flourishing in sovereignty, in treasure, in magnificence of works, in atten-

* Mr. Glassford has "rid."

† *Partem et consortium*.—Mr. Glassford has "part and concert."

‡ Mr. Glassford has "merited."

ance and service, in shipping, moreover, and in renown at home, and in the height of men's admiration, as yet chose any of these for the matter of his glory, but pronounced that "The glory of God is to conceal a thing, the glory of man is to find out a thing."

Then if he will, let any one reflect what difference between the life of man in any the most cultivated provinces of Europe, and in some the wildest and most barbarous regions of the new Indies, he shall esteem the difference so wide, as may be deservedly said, that "man is to man a god," not in account of help only and advantage, but also on a comparison of estate. And this is procured neither by soil, nor climate, nor bodily power, but by arts.

Again, it is to our purpose* to remark the force, and virtuous consequences, of things invented, which in none others more manifestly appear than in those three unknown to the ancients, and whose beginnings, though recent, are dark and with celebrity; namely, the *art of printing*, *gunpowder*, and the *mariner's needle*. For these three have altered the face and condition of the whole world, the first in letters, the second in war, the third in navigation: whence innumerable changes of things have ensued; so that not any government, not a sect, not any planet, seems to have exercised a greater command and influence,† as it were, upon human affairs, than these mechanical inventions‡ have exercised.

Moreover, it will not be foreign to distinguish three kinds and degrees, as it were, of human ambition. The first is those who desire to enlarge their own power in their country, which sort is common, and unworthy. The second is those who struggle to extend the power and dominion of their country among human kind; and that has more of humanity doubtless, not less of cupidity. But if one endeavour to know and enlarge the power of the human kind itself, and to reign over the universe, beyond question this ambition (if it is to be so called, indeed) is both more wholesome than the others, and more majestic. But man's sovereignty over things is placed in art and science alone. For nature is commanded except by obeying.

Bestow, if the usefulness of any one invention separate

* Mr. Glassford has "availing."

† Mr. Glassford has "withux."

‡ Mr. Glassford has "mechanicals."

e moved * men so, as that they have accounted † him who, some particular benefit, could bind the whole human race, be more than man; how much higher shall it not be thought to invent something so excellent, that by it all things else may easily be invented? And yet (that we may every way speak the truth), in the same manner that we are much beholden to the light, for that by it we are able to journey, to exercise arts, to read, to discern each other; and, nevertheless, the view itself of the light is a more excellent and a more beautiful thing than its manifold uses; so, for certain, the very contemplation of things as they are, without superstition or imposture, error or confusion, is of greater worth in itself than the whole fruit of inventions.

Lastly, if any should object the depravation of knowledge and arts to uses of malice, and luxury, and the like, let it move no one. For it may be said of all earthly goods; of wit, courage, strength, beauty, riches, light itself, and every thing else. Let mankind only recover their right over nature, which belongs to them by the divine endowment, and room be given for its exercise; just reason and sound religion will direct the use.

In the 130th and last aphorism of this First Book Bacon intimates that he does not attribute to the art of interpreting nature, which he is now about to expound, any absolute necessity (as if nothing could be done without it), nor does he even hold it forth as perfect, or such as that nothing can be added to it. On the contrary, it behoves *him*, more especially, by whom the mind is always considered not simply in its own powers, but as it is connected with things, to hold that the art of discovery may grow with the progress of discovery.‡

* Mr. Glassford has "should move."

† Mr. Glassford has "as they should account."

‡ The point of this concluding sentence is lost in Mr. Wood's translation:—"On the contrary, considering the mind in its connexion with things, and not merely relatively to its own powers, we ought to be persuaded that the art of invention can be made to grow with the inventions themselves."

THE Second Book of the *Novum Organum*, though longer than the First, contains much less than is interesting at the present day, and a very summary view of it will suffice. Occupied more with facts and special investigations than with general views and principles, it not only wants the unity and finish which distinguish the First Book, but, owing to the immature state of physical knowledge in Bacon's day, and his extremely imperfect acquaintance with any of the branches of it that had been at all systematically cultivated, it is full of matter entirely worthless in itself, only curious as now and then illustrating the past history of science. We will extract, however, all that is necessary for putting the reader in possession of what is called the Baconian System of Philosophy, in so far as it is here expounded.

The Book, which is arranged, like the First, in a series of Aphorisms (though they do not so well deserve that title as the generally brief, compact, and pointed paragraphs, or statements, of the former Book), begins with a disquisition on the investigation of what Bacon calls *forms*, which, with the examples, extends over the first twenty aphorisms, making about a third part of the Book. The commencing aphorism may be thus literally translated:—

To generate and superinduce a new nature, or new nature upon a given body is the labour and the aim of human power; but to discover the form of a given nature or its true difference [that is, from other natures], or its naturalizing nature *naturalitatem*, or its fountain of emanation (for such are terms we possess approaching nearest to the indication of thing), is the labour and the aim of human science. And these primary labours are subordinated two other labours which are secondary and of inferior rank; to the former, namely, transformation of concrete bodies into one another, in so far as that is within the limits of possibility; to the latter, the discovery, in every kind of generation and motion, of the latent process as extending from the manifest agent and the manifest material to the acquired form; and the discovery in

of the latent conformation (*schematismi*) of bodies are quiescent and not in motion.

reasoning then proceeds as follows. Although it really exists in nature except individual bodies, being pure individual acts according to the law that governs them; yet in science, that law, and the investigation, discovery, and explanation of it, constitute the foundation both of knowledge and of practice. That is what is to be understood by the form of anything in nature. It is only the knowledge of forms that apprehends the unity of nature in the most dissimilar cases, and that therefore can enable us to discover how forth things that have never yet been done, such as neither the vicissitudes of nature, nor the results of experiment, nor accident itself, would ever have come about, or such as would never have entered men's thoughts. The safest way is to begin and build up the sciences from those foundations which are laid with a view to practice, and to allow that to mark out and define the part of contemplation, or theory. It is laid down in regard to a true and perfect rule for every kind of operation, that it be certain, free, and agreeable to actual performance ("disponens sive in ordine ad rem"). "And this," continues Bacon, "is the thing which with the discovery of a true form. For the form of any nature is such that, it being set up (*posita*), the given nature infallibly follows. Wherefore it is constant when the nature is present, and universal to all instances of it, and is in the whole of it. This same is such, that, it being removed, the given nature immediately vanishes. Wherefore it is constantly absent when the nature is absent, and constantly negatives it, in it alone. Lastly, the true form is such, that it

that law and its paragraphs (*ejusque paragraphos*), says

The paragraphs of a law are merely its clauses. Mr. translation—"This law, and its parallel in each science (whatever the latter expression may mean) is quite possible.

deduces the given nature from some fountain of an essence which exists in many things, and which is better known to nature (as they express it) than the form it assumes. Wherefore, respecting a true and perfect axiomatic science, this is what we pronounce and lay down, "where be found some nature which shall be convertible with the given nature, and which shall yet be a limit of a more known nature after the manner of a true genus." But these two rules, the active and the contemplative, are the same thing; and that which is the most useful in practice, the same is the most true in theory."

It may be presumed that it is not from passages such as this that Bacon derives his claim to be accounted the father of modern physical science. But the notions which he here enunciates constitute an important part of his philosophical system. The investigation of what he calls *forms*, indeed, may be said to be the grand object or purpose of his philosophy. He conceives that the real improvement in science is to be hoped for in every department of nature without the discovery of forms. Yet it may be questioned if he attached any clear or consistent idea to the term. He informs us, indeed, in one of the above aphorisms, and more expressly in a subsequent one (the 17th), that a form is the same thing as a law; and hence it has been commonly stated that wherever Bacon speaks of a form in physics we are to understand him as meaning simply what is now commonly called a law of nature. But the fact is, that a law of nature with him is quite a different thing from what is now so called. This is evident from his explanation of what he means by a law or form, and still more from his examples. We have found him, for instance, in the Fourth Book of the *De Augmentis** asserting that no inquiry had been made into the form of light in the same paragraph in which he complains that the attention of inquirers had been solely directed to what he calls perspective and radiations, and that the

* See ante, p. 9.

f the whole subject had been vitiated by the application of mathematics. The fact that the angle of reflection is equal to the angle of incidence would not have been accepted by Bacon as a law of light. A law of nature in modern physics is merely a statement of the manner in which nature has been uniformly found to act under certain given circumstances. Hence it implies always a certain agent or process. It is a statement of some *operative* nature. Modern physics know nothing of any law of light, or heat, or any thing else, in a state of rest. Bacon's use of the term has no such limitations. With him every natural substance—every nature as such—has its law, absolutely and under all circumstances; which he tells us, as we have seen, is the same with that which distinguishes it from every other substance, or with its *natura naturans*, or the nature that creates it and makes it what it is, or with what he calls the fountain from which it emanates, meaning evidently the principle in the constitution of things to which the thing owes its existence. Anything more entirely different, more widely different, from what is now understood by a law of nature cannot be imagined.

One of the ablest and most judicious commentators on the *Novum Organum*, indeed, and one who has the highest estimate of the claims of the method therein unfolded, in respect both of its novelty and its practical importance, the late Professor Playfair of Edinburgh, in his 'Dissertation on the Progress of Mathematical and Physical Science,' prefixed to the *Encyclopædia Britannica*, frankly given up all the pretensions of the *novum organum* to be regarded as anything of the same kind with what we now call a law. Having explained the *form* of a phenomenon, in the language of Bacon, as its cause, or its essence, he adds: "The form, then, is in nothing from the cause; only we apply the word *form* where it is event or change that is the effect. The effect or result is a permanent quality, we call it the form or essence."* And afterwards he ob-

* Dissertation, p. 459.

serves: "It also appears that Bacon placed the ultimate object of philosophy too high, and too much out of the reach of man, even when his exertions are most skilfully conducted. He seems to have thought, that, by giving a proper direction to our researches, and carrying them on according to the inductive method, we should arrive at the knowledge of the essences of the powers and qualities residing in bodies; that we should, for instance, become acquainted with the essence of heat, of cold, of colour, of transparency. The fact, however, is, that, as far as science has yet advanced, no one essence has been discovered, either as to matter in general, or as to any of its more extensive modifications."* And again: "In consequence of supposing a greater perfection of knowledge than is ever likely to be obtained, Bacon appears, in some respects, to have misapprehended the way in which it is ultimately to become applicable to art. He conceives that, if the *form* of any quality were known, we should be able, by inducing that form on a body, to communicate to it the said quality. It is probable, however, that this would often lead to a more easy and simple process than that which art has already invented. In the case of colour, for example, though ignorant of its form, or of the construction of surface which enables bodies to reflect only light of a particular species, yet we know how to communicate that power from one body to another. Nor is it likely, though the structure were known with ever so great precision, that we should be able to impart it to bodies by any means so simple and easy as by the common process of immersing them in a liquid of a given colour."† This is generally expressed, but sufficiently explicit. We may remark, however, that the discovery of a construction of surface which enables bodies to reflect only light of a particular species certainly would not have satisfied Bacon's demand for the *form* either of light or of colour.

He proceeds to say that the rule or axiom respecting the transformation of bodies is of two kinds; the first

* Dissertation, p. 473.

† Ibid.

nplating the body as an aggregate of simple natures, the second, which depends on the discovery of latent process, proceeding not by simple natures, but by concrete bodies, as they are ordinarily found in nature. A long illustration of this useless distinction is followed up by a warning that no one must hope to settle the question whether the diurnal motion be the rotation of the earth or of the heaven unless he shall have first made himself master of the nature of spontaneous rotation.

The subject of the Latent Process is then taken up. This is meant not any measures, marks, or steps of analysis, which are discernible in bodies; but such a latent process as for the most part escape the senses. Investigation of this is put forward as altogether a new proposition. Equally new is asserted to be the invention and discovery of the latent schematism, or latent conformation, of bodies. For this latter object, it is told, "a separation and solution of bodies is to be effected, not by fire, but by reasoning and true induction with the aid of experiments; and by a comparison of other bodies, and a reduction to simple natures, and forms, of those things which meet and are intermingled in composition; and we must pass from Vulcanian to æthereal, if we would bring forward into the light the textures and conformations of bodies, upon which all the occult and, as they are called, specific properties and powers in things depend, and whence also every rule of occult alteration and transformation is derived." "And the discovery of latent conformation," it is afterwards said, "it is from the primary axioms that there is sent forth true and clear light which dissipates all darkness and occult." There is no reason to apprehend that in any way we shall be led to the atomic theory of the ancients, "which," says Bacon, "presupposes an infinite and immutable matter, both of which notions are false—but only to true particles, such as they are found in nature." And it is further stated that the inquiry of nature proceeds best when the physical is terminated in the

mathematical; that is apparently, when a physical discovery is converted into a mathematical theorem.* Finally, from the two kinds of axioms arises the true division of philosophy and the sciences; according to which, by a transference of the received terms to his own sense, Bacon proposes that the investigation of *forms*, which by their very nature eternal and immovable, should constitute Metaphysics; and that the investigation of the *agents* (*efficientis*), and of the material, and of the latent process, and of the latent schematism (which all regulate the common and ordinary course, not the fundamental and eternal laws, of nature), should constitute Physics. And to these sciences he proposes that two practical arts should be respectively considered as subordinate, namely, to Physics Mechanics, and to Metaphysics Magic, in a purified sense of the term), "on account of its breadth, and its ample empire over nature."†

Having thus settled the scope or object of his philosophy, Bacon next, in the 10th aphorism, proceeds to lay down its precepts or rules, and to illustrate them by examples. The Interpretation of Nature he divides into two parts;—the first, the erecting and building up axioms from experiment; the second, the deducing and deriving of new experiments from axioms. And the first is further subdivided into what he designates three utilizations, or services; namely, that for the senses, that for the memory, and that for the mind or reason. The means of the first is to be prepared, as the foundation of the whole business, a sufficient collection of facts, of Natural and Experimental History; by the second, the facts are to be properly distributed, and arranged up-

* The Latin is "*quando physicum terminatur in mathematico*," which will hardly warrant Mr. Wood's translation, "when mathematics are applied to physics,"—whatever difficulty there may be in assigning Bacon's true meaning.

† These last words seem to be understood, erroneously, by Mr. Wood, as connected with, and explanatory of, the preceding expression, "in a purified" (or, as he translates it, in the best sense of the term.)

as ; by the third, that true and legitimate Induction is applied, which is the very key of the interpretation.

An example of the investigation of forms is then given in an investigation respecting the form of Heat. This leads over the eleven aphorisms from the 11th to the 21st inclusive. First, twenty-seven instances are enumerated, without order, of things possessing the natural quality of heat ; forming what is demonstrated a Table of Absence and Presence. Next is given a collection of twenty-two instances in which the quality of heat is missing, while they are all at the same time such as to show the character of negatives or exceptions to one or more of the preceding instances, so that they are called by the author Proximate Instances (*Instantiæ in Proximo*) : forming his table of Declination or Absence in Proximity.

Thirdly, there are set down forty-one instances in which the quality of heat exists in different degrees according to circumstances ; making what is called the Table of Degrees, or of Comparison. "For," says Bacon, "since the form of any thing is the very nature of itself, and a thing differs from its form no other than as the apparent differs from the existent, or outward from the inner, or in relation to man from in relation to the universe ; it necessarily follows that no form can be received for a true form unless it constantly varies when the nature itself decreases, and in like manner be constantly augmented when the nature itself is augmented." Here the term *nature* (*natura*) is evidently used in two senses ; though what they precisely might be hazardous to attempt to define.

These three tables having been drawn up,—an operation which Bacon terms the Presentation or Exhibition (*parentia*) of instances to the understanding,—two of the three ministrations have been performed. Now, therefore, commences the third work, that of Induction. "What there is to be found," says Bacon, "upon the presentation of all and each of the instances, such a nature as the given nature may constantly be present and

absent, increase and decrease, and be (as has been said above) the limitation of a more common nature.* If the mind attempt this in the first instance by an easy act of affirmation,† (which, when left to itself, it always does) there arise fancies, and notions, all ill defined, and axioms continually requiring correction, unless, indeed, (as is the custom of the schools,) we would contend for falsehoods. These conjectures will no doubt be better or worse, in proportion to the faculty and force of the understanding by which the operation is performed. God, no doubt, (the bestower and creator of forms,) and perhaps the angels and superior intelligences, are competent to recognize forms affirmatively at once, and at the beginning of the contemplation. But assuredly this is beyond the power of man, to whom it is only given to proceed in the first instance by negatives, and to end at last with affirmatives, after every kind of exclusion."

Rejection or exclusion, therefore, he proceeds to intimate, is the first work of true induction, in the investigation of forms; the rejection, that is to say, "of each of those natures which are not found in any instance where the given nature is present; or are found in an instance where the given nature is absent; or are found in any instance to increase when the given nature decreases, or to decrease when the given nature increases." All such rejection and exclusion properly made, will remain in the second place, as it were at the bottom, an affirmative, solid, true, and well-defined form, mere volatile opinions going off into smoke.

* In the Latin "*Limitatio naturae magis communis.*" Wood translates "a more common limit of the nature." But the construction of *communis* is indicated, we apprehend, by the preceding passage to the same effect in the aphorism, to which reference is made:—"et tamen sit limitatio naturae notioris."

† This would seem to be the sense intended to be conveyed by "*Hoc si mens jam ab initio tentet affirmativè.*" Wood's translation omits the "*facile*," as it also does altogether the concluding clause of this sentence.

give the seventeenth aphorism in Shaw's translation:—

here a general caution, or perpetual admonition, must be lest, as we seem to attribute so much to forms, what we them should be understood of such forms as men have accustomed themselves to consider.

we do not at present speak of compound forms, that is, mixtures of simple natures, according to the common order of the universe, as the form of an eagle, a lion, a rose, &c., the time of treating which will be when we come to the hidden processes and secret textures, and the discovery of the laws as they are found in those called substances, or composites.

even in the case of simple natures, we must not be understood to mean any abstract forms, or ideas, that are undetermined, or ill-determined, in matter. For when we speak of forms, we mean no other than those laws and determinations of pure action which regulate and constitute any nature, as heat, light, and gravity, in all kinds of matter and subjects susceptible thereof; and therefore the form of heat, the form of light, is the same thing as the law of heat, or the law of light: for we perpetually keep close to practice and to ourselves; and therefore when we say, for example, in inquiry into the form of heat, reject tenuity, or tenuity is the form of heat, it is the same as if we said, men may produce heat upon a dense body; or, on the other hand, men may take away heat from a rare one.

But if any one shall think that our forms have somewhat mixed in them, because they appear to mix and join together things that are heterogeneous, as the heat of the celestial and the heat of fire; the fixed redness of a rose, and the transient redness of the rainbow, the opal, or the diamond; by drowning, and death by burning, stabbing, the apoplexy, consumption, &c., which, though very dissimilar, we are to agree in the nature of heat, redness, death, &c., he must remember that his own understanding is held and led by custom, things in the gross, and opinions. For it is not that the things above mentioned, however heterogeneous and diverse they may seem, agree in the form, or law, that is heat, redness, and death. Nor can the human power be otherwise freed, and set at liberty from the common course of nature, and extended and exalted to new efficient causes, and new operations, than by disclosing and investigating this kind

of form. But after treating of this unity of nature, which is the most capital thing, we shall proceed to the true divisions and paths of nature, as well the ordinary as internal.

The process of rejection or exclusion is then illustrated by a collection of the natures which appear from the preceding tables not to be the form of heat, as, for instance, from heat being found in many bodies not luminous, to reject light as that form. The natures enumerated in the table are fourteen; but it is added that there are some more, and it is intimated that the tables are presented as perfect, but only as examples. Each particular instance in the table, as is observed, invalidates the claim of some nature or other to be accounted the form, and "in operating upon heat," we are told "man is freed from all the natures therein enumerated." The meaning seems to be, that no one of the said natures will need to be made use of when we come to apply the form of heat (by which Bacon imagined such great things were to be done)—if we should ever be fortunate enough to catch it.

It is acknowledged that the Table of Exclusions never can be made perfect in the first instance; and indeed this is sufficiently manifest, yet, as truth emerges sooner even from error than from entire confusion, it is deemed proper that at this stage, after the three tables of First Presentation, such as they are, have been drawn up and considered, the understanding may make an attempt at the work of interpreting nature affirmatively. This attempt is designated the Permission of the Understanding, or the Inchoate Interpretation, or the First Vintage. And then follows an example in the First Vintage respecting the Form of Heat. It is preceded or introduced by a paragraph to the effect that the form of any thing exists in all and each of the instances in which the thing itself exists; for that otherwise it were not the form; so that clearly no contradictory instance can be here produced. In other words, all the instances from which this First Vintage is gathered must exhibit the form more or less evidently. But the form is not

conspicuous in some instances than in others; in namely, where the nature of the form is less reduced, and impeded, and rendered subordinate ("re-in ordinem") by other natures. Such instances it is proposed to call *Coruscations* or *Out-blazings* (*Edu-tive*), or *Displaying Instances* (*Instantive Osten-*

in each of the instances and all of them taken together. Bacon conceives that the nature the limitation of is Heat appears to be Motion. Afterwards he four differences which limit motion and constitute the form of heat; and the final conclusion to which comes in this First Vintage is, that the form or true nature of heat (regarded with reference to the union and not simply with relation to sense) may be thus expressed:—"Heat is motion, expansive, restrained, pressing through the smaller parts of bodies: the motion being characterized by its spreading in all directions, but yet inclining somewhat towards the upper; the pressure through the parts, by its being not at grish, but vigorous and somewhat impetuous." We give the remainder of the statement as translated by :—

As to practice, the case is exactly correspondent, and leads to this: that, if in any natural body a motion can be found, which shall dilate or expand, and again recoil or turn upon itself, so as that the dilation shall not proceed equally, but partly prevail and partly be checked, any man doubtless produce heat; without at all regarding whether the motion that is wrought upon be elementary, as they call it, simply; or whether it be enriched with a celestial influence; or it be luminous or opaque; rare or dense; locally extended or confined within its original dimensions; whether it be dissolved or remain in its native state; whether it be animal, vegetable, or mineral; whether it be water, oil, air, or any other substance that is susceptible of the foresaid motion. Heat, in respect of the sense, is the same thing; only with differences as belong to sense.

It seems very like a conclusion in which nothing is

concluded. Professor Playfair, however, has pronounced that, although Bacon's collection of facts on the subject of Heat be imperfect, "his method of treating them extremely judicious, and the whole disquisition highly interesting."* But he does not go so far as Dr. Sharpe, who expresses his admiration of this example of the method of investigating forms, as follows — "Though this method is here so fully delivered, and promises better things than possibly any other method of inquiry hitherto known, yet it appears strangely to be disregarded. And certainly it should seem as if very few were apprized that this method, thoroughly pursued, is an actual demonstration, as justly and properly suited to physics, or indeed to all philosophy, as mathematical demonstration and algebra are to geometry and general mathematics."

The investigation of the form of Heat appears to have been formerly regarded as the most interesting portion of the *Novum Organum*, or at least as the part of the work that was likely to prove the most generally attractive. It is extracted in full, without any reference to the *Organum*, and produced as a separate treatise, in a small collection of Bacon's physical writings printed in a 12mo volume at Leyden in 1638, with the title of "*Francisci de Verulamio Historia Naturalis et Experimentalis de Ventis, &c.*;" pp. 191-277. It is also included, under the title of "The Natural and Experimental History of the Form of Hot Things," in an English translation of the volume by R. G., Gent., originally published in 12mo at London, in 1653, and reprinted in the Second Part of the *Resuscitatio*, folio, Lon., 1651.

And the investigation may be admitted to be really, in some respects, both curious and ingenious. It is curious as a record of the knowledge, or rather of the ignorance, of that age, and of Bacon himself. Even Playfair does not effect to rate it high on account of many new facts or observations which it contains. Bacon, we are merely told "here proposes, as an experiment, to try the reflection of the heat of opaque bodies. He mentions also the

* Dissertation, p. 460.

[illegible]

sense of a word than to any real conformity to
 or image, form the dulcia vitæ of his style, the
 of our philosophical Samson. But in this in-
 as indeed throughout all his works, the meaning
 and evident; namely, that the sense can appre-
 through the organs of sense, only the phenomena
 by the experiment: *vis vero mentis est, quæ ex
 tantum excogitaverat, de re judicet*:" that is, that
 which out of its own conceptions had shaped the
 must alone determine the true import of the
 phenomena." About the correctness of the view here
 by Coleridge of the nature and necessary meth-
 philosophical investigation, there can be no question
 to transcribe a few words that we have used elsewh-
 on this subject:—"Whenever a discovery is made
 about being anticipated, we say that it has been made
 chance. The history of all discoveries that have been
 arrived at by what can with any propriety be called phi-
 sophical investigation and induction attests the necessity
 of the experimenter proceeding in the institution
 management of his experiments upon a previous idea of
 the truth to be evolved. This previous idea is what
 properly called an hypothesis, which means some-
 placed under as a foundation or platform on
 to institute and carry on the process of investi-
 A theory is a completed view of an hypo-
 system of truths, evolved and proved by
 tion or induction. As the latter is the necessary
 pletion of every philosophical inquiry, so the former
 its equally indispensable beginning."† But, if
 Bacon's view, certainly not a trace of it is to be
 in the present investigation into the form or
 Heat; or, it may be added, of any of his other
 rimental inquiries. His method of procedure
 developed, sets out simply with a blind accu-
 instances, no more collected under the guidance

* But whence are these words? Are they Bacon's own?

† Pursuit of Knowledge under Difficulties (Weekly Volume, No. 31.)

kind of anticipation or hypothesis than are the fishes, great and small, that the net brings up when cast into the sea. Whatever chances to come to hand is laid hold of. It is no doubt probable that in this way all the necessary instances will usually be obtained ; we do not assert that the method would prove positively ineffectual in any case in which it should be employed ; what we say is, that is not the shortest method, nor the method which ever has been or ever will be employed in the actual business of investigation and discovery. It has been employed indeed by Bacon himself, who never invented or discovered any thing in physics : but by no other human being. If Bacon had laid it down as one of the rules or principles of his method, that, in the course of conducting any investigation according to it, a man should walk a certain number of measured miles on all fours, or with peas in his shoes ; or if he had required that every one of his instances should be set down in all the languages of Europe ; the method might still have served its purpose, notwithstanding the useless trouble thus imposed by it. But the indiscriminating and unreflecting rapacity with which he gathers in his instances from all quarters, and of all kinds, only encumbers and bewilders the investigation. The sagacity, or species of prescience, which is a part of the inventive faculty, dispenses with all this labour and all this parade. Instead of all kinds of instances, a few judiciously selected instances, sometimes only a single instance, will be all it requires. From those few, or that one, it will work its way to its end much more expeditiously and more surely than if it had started with the advantage of having previously made a formal survey of all the instances in nature. The notion of any one seriously setting about a philosophical investigation by means of Bacon's three tables of Essence and Presence, of Declination, and of Degrees, is ludicrous. It reminds one of the " project for improving speculative knowledge by practical mechanical operations" of the professor in the Grand Academy of Lagado, the frame with the forty iron handles, by which " the most ignorant person, at a reasonable charge, and with a little bodily

our, might write books in philosophy, poetry, politics, laws, mathematics, and theology, without the least assistance from genius or study."—It might almost indeed be suspected that Swift here had Bacon in his eye. Other things in the irreverent satire seem to glance at the very words of the illustrious author of the *Instauratio Magna*, when the professor is made to declare that his invention "had employed all his thoughts from his youth," and to say "he flattered himself that a more noble, exalted thought never sprang in any other man's head." At any rate, the description of the invention is hardly an exaggeration of what appears to have been Bacon's own notion of the efficacy of his *Novum Organum*, or new instrument of discovery. It was to be almost literally a machine in men's hands. It was to level intellects, and enable the weakest to do the work of the strongest. So far from its requiring any guiding idea or anticipation in the mind of the experimenter, it was to make all inventive sagacity unnecessary and useless.

We now enter upon what may be called the second part of this Second Book, in which the author proposes to consider the remaining helps necessary for the understanding in the work of the Interpretation of Nature, and of a true and perfect Induction. He will treat, he says, respecting, first, the Prerogatives among Instances (*Prærogativa Instantiarum*): secondly, the Aids or Props (*Admunicula*) of Induction; thirdly, the Rectification of Induction; fourthly, the Varying of the Investigation according to the nature of the subject; fifthly, the Prærogative ones among Natures, in so far as regards investigation, or what should be investigated first, what last: sixthly, the Limits of Investigation, or a synopsis of all the natures in the universe; seventhly, the Reduction to Practice, or what relates to man; eighthly, the Preparations (*Parasceus*) for investigation; lastly, the Ascending and Descending Ladder or Stair (*Scala*) of Axioms. Of this extensive design, however, all that we have actually executed is the first head.

Anciently, when the Roman people voted by centuries, the century to whose lot it fell to give its ve-

(*rogari*) first was called *Praerogativa*, literally, the first consulted century. By the *Praerogativa Instantiarum*, therefore, Bacon means merely those instances that deserve first or principally to be attended to. It will be more convenient in English to vary the form of the expression, and to call them, as has been usually done, *Prerogative Instances*.

The remainder of this Second Book of the *Novum Organum* consists of an enumeration of twenty-seven different kinds of Prerogative Instances, accompanied with elaborate expositions and illustrative exemplifications. The account will not admit of any intelligible abridgment. We will preserve the list of names complete; but all that we shall attempt further will be to extract some of the more interesting and important passages, which we shall give as translated by Shaw.

1. *Solitary Instances*.—

Among the prerogative instances for interpreting nature, in first place come the solitary kind; that is, those which exhibit the nature inquired after, in such subjects as have nothing common with others besides that very nature; or, those that exhibit the nature inquired after, in such subjects as are every way similar to others, excepting in that very nature. For it is manifest, that such instances as these will shorten the inquiry, and promote and hasten the exclusion; so that a few of them may do the service of many.

For example, if the inquiry be about the nature of colour, solitary instances are prisms, and crystal gems, or glasses, which represent colours, not only in themselves, but also externally upon a wall, &c. Understand the same of dews, &c. For these have nothing in common with the fixed colours of flowers, coloured gems, coloured glass, metals, various woods, &c. besides the colour itself. Whence it may be easily inferred, that colour is nothing more than an alteration in the rays of light, occasioned, in the first case, by different degrees of incidence; and, in the second, by the different texture or structure of the body, and so reflected to the eye. But these instances are solitary, or single, in point of likeness.

Again, in the same inquiry, the distinct veins of black and white in marble, and the variegation of colours in flowers of the same species, are solitary instances, for the black and white

parts of marble, or the spots of white, agree almost in every respect, except easily collected, that colour does not intrinsic nature of the coloured body, what gross, or bare mechanical terms these instances are solitary, in particular both the kinds by one and the same

2. *Travelling Instances (Instances)*

* In the second place come travelling instances wherein the nature inquired after is generation, when it was not before is contrary, travels, or tends to destruction before. And, therefore, in either case are always duplicate; or rather one passage, is continued to the opposite of this kind not only accelerate an exclusion, but also drive the affirming narrow compass. For the form of being somewhat introduced, or abolished. And, though all exclusion promotes generation, yet this is more directly than in different ones; for it plainly said before, that the form discovering to its discovery in all the rest. The passage is, the nobler the instance is.

Again, these travelling instances are because, as they exhibit the form of privation, they clearly design or mention in some cases, whence at y call to the neighbouring discoveries. A danger in these instances, that reason for they may be apt to restrain the efficient, and to infect or at least to fix a false notion of the form, through the efficient; whereas the efficient is not of the form. But this inconvenience making a just exclusion.

To give an example of a travelling instance inquired after was white

called also *Blazings* (*Effluvescentiæ*) and *Liberated Predominant Instances*. It is as an example of these instances that the Thermometer is introduced, under the name of *vitrum calendare æris*, which should mean calendar glass of the air, but which Bacon probably intended to signify the glass for measuring the *heat* of air, under the notion that *calendare* was a derivative of *calco*.*

4. *Clandestine or Twilight Instances*, which are opposite of the preceding. —

For example; let the nature inquired into be consistency or solidity, the contrary of which is liquidity or fluidity. clandestine instances are such as exhibit some faint and degree of consistency in a fluid; suppose a bubble of water which is a kind of consistent and determinate pellicule, and of the body of the water. In like manner icicles, if they follow the water to follow them, lengthen themselves out in a slender thread, to prevent a discontinuity of the water; but if there be not a sufficient quantity to follow, the water then falls in round drops, which is the figure that best supports it against discontinuation; and at the very instant when the thread of water ends, and the falling in drops begins, the water rises upwards to avoid being discontinued. So in metals, which melt upon fusion, though a little tenacious, some of the mass frequently springs up in drops, and sticks in that form to the sides of the crucible. There is a like instance in the soap-glasses, commonly made of spittle by children, in a fork, rush, or whalebone, where we find a consistent periculous water. But this is observed to much better advantage in another diversion of children when they take strong soapy water and blow in it with a pipe, so as to raise the water into a tower or castle of bubbles, whilst by the interposition of the air soapy water becomes consistent to that degree as to last for a considerable distance without breaking. This also ap-

* Shaw translates it the weather-glass, which would now be understood to mean the barometer, an instrument not known in Bacon's day; but the thermometer also was formerly called the weather-glass. Thus Dryden writes:

As in some weather-glass my love I hold,
Which falls or rises with the heat or cold.

tage in froth and snow, which put on such a consistence that they may be almost cut with a knife, though they be bodies formed of air and water, both of them fluid. Several instances seem clearly to intimate that fluidity and consistency are no more than vulgar notions relative to our sense, and that all bodies have a real appetite to continuation, though in homogeneous bodies, such as air, it is but weak and feeble, whilst in those composed of heterogeneous matters, it proves more strong and manifest, because the application of what is heterogeneous dissolves up, but the entrance of what is homogeneous readily dissolves them.

For farther example; if the nature sought were attraction, and appetite of approach in bodies, a most remarkable glaring instance as to the discovery of the form, is the loadstone. The nature of an attractive nature is an unattractive nature, in a similar substance; as in iron, which does not attract iron; nor does lead attract lead, nor wood attract wood, nor attract water. But the loadstone armed with iron, the iron of an armed loadstone, is a clandestine influence; for here it happens, that an armed loadstone does not, at a distance, attract iron stronger than an unarmed one; but if the iron be moved so near as to touch the loadstone, the armed loadstone will attract a much greater weight of iron, than the naked and unarmed loadstone, by reason of the similitude of substance between iron and iron, which operation was altogether clandestine and secret, or concealed in the iron before the loadstone was applied. Whence it is manifest, that the form of iron is a thing that is vivid and strong in the loadstone, and latent in iron.

In the same manner, it is observed, that headless arrows being fired out of a gun, will penetrate farther into the sides of a ship, than the same arrows headed or pointed with iron, by reason of the similitude of substance between wood and wood, though this before lay concealed in the wood.

And though air does not manifestly attract air, nor water readily attract water, in a state of entireness, yet one bubble dissolving another makes it easier dissolve, than if the other were away, by reason of the appetite of conjunction between water and water, and between air and air.

These kind of clandestine instances, which, as we before observed, have a noble use, are most remarkable in the small

and subtle parts of bodies, because the greater masses follow the more general and universal forms.

5. *Constituent, or Handfilling (Manipulative) stances* :—

For example, let the nature sought be memory; means of exciting and helping the memory; the common instances will here be, first, order, or distribution, and for artificial memory. Order, or distribution, manifests the memory; and places for artificial memory may be places in a proper sense, as a door, a window, a corner, familiar and known persons; or any other things at hand provided they be placed in a certain order, as animals, words, letters, characters, historical personages, &c., some of these are more, and some less fit for the purpose; such kind of places greatly help the memory, and raise it above its natural powers. Again; verse is easier learned and remembered than prose.

And this collection, or packet, of the three above-mentioned instances, viz. order, artificial place, and verse, constitutes a species of help for the memory: and this species of help may be justly called the prevention of endless search. For a person endeavours to recollect, or call a thing to mind, but has no previous notion or perception of what he is in quest of; he casts about, and tries every track, as it were without success; but if he has any previous notion, this infinity of search is presently cut short; and the memory is brought to hunt its quarry home. But in the three instances above mentioned, there is a clear and certain previous notion contained. For in the first, there is required somewhat agreeable to order; in the second, an image is required, that has some agreement, or relation to those fixed places; in the third, words that will stand in a certain order, so that infinity is thus cut off or prevented, and the search is limited and restrained.

Other instances will give this second species; that which brings an intellectual thing to strike the sense (which is the method principally used in artificial memory), by means of remembrance.

Other instances will give this third species; that those things which make an impression by means of a strong emotion, or passion, as by causing fear, surprise, blushing, delight, &c., assist the memory.

Other instances will give this fourth species; that those things which

think the deepest; and dwell the longest in the memory, are chiefly impressed upon a clear mind, that remains undisturbed, either before or after the impression; as the child learns in childhood, or think of just before going to sleep, as likewise all the first times that things are taken notice of.

Other instances will give this fifth species; that a multitude of instances, or, as it were, handles or holds to be taken, assist the memory: as the making of many breaks in writing, or in reading: reading or repeating aloud, &c.

Other instances will give the sixth species of help; those things which are expected, and raise the attention, rather than such as pass slightly over the mind: whence, if a man should read a writing twenty times over, he would not remember it so well, as if he should read it but ten times, with long intervals between whiles to repeat it; and consulting the copy, when his memory failed.

There are, as it were, six lesser forms of helps for the memory; viz. (1) the cutting off infinity; (2) reducing intellectual things to sensible things; (3) impression by a strong passion; (4) passion upon a mind free and disengaged; (5) variety of places, or occasions; and (6) expectation conceived.

*Informable or Proportionate Instances (Instan-
formes sive Proportionatae); called also Pa-
ramorphical Similitudes.*

This precept cannot be too frequently inculcated, that the nature and method of mankind in their inquiries and observations to collect a natural history, must be entirely altered from the method at present in use; for men's curiosity and industry have been hitherto principally employed in observing the differences of things, and explaining the precise differences of vegetables, and fossils, the greatest part of which differences are rather the sport of nature than of any considerable and solid use to the sciences. These differences, indeed, serve for delight, and sometimes for practice, but afford little or no true information, or insight into nature; human industry, therefore, must be employed on inquiring into, and observing the similitudes and correspondences of things, as well in their wholes as in their parts; these are what unite nature, and begin to build up the

7. *Singular Instances* (*Instantiæ Monodicae*) ; also *Irregular* or *Heterorite Instances*.

8. *Deviating Instances*.

9. *Frontier Instances* (*Instantiæ Limitantes*) , also *Participles* (*Participia*) , from participating of different natures ; as the participle in grammar is so be so called from its participating of the nature both of noun and the verb.

10. *Instances of Power, or of the Facies* ; called the *Head-works* or *Hand-works* of Man (*Ingenia* , *Manus Hominis*).

For example, paper, though a very common thing, is a singular instance of art. For it well observed, artificial matters are either merely wove with direct and transverse threads, as silk, cloth, linen, &c. or made of concreted juices, as clay, glass, enamel, porcelain, and the like, which if united shine, but if less united, prove hard, but bear no fire. And all these latter substances, made of concreted juices, are brittle, and do not hold tenaciously together. On the contrary, paper is a tenacious substance, that may be cut, or so that it resembles, and in a manner rivals the skin, or the brane of some animal, the leaves of some plant ; or the production of nature : for 't is neither brittle, as glass ; thready, as cloth ; for though it has its fibres, yet it has distinct threads ; but exactly resembles the texture of some matters ; insomuch that the like can hardly be found among artificial things ; but it remains perfectly artificial. And in artificial things, those, doubtless, are to be preferred which imitate and resemble nature the nearest ; or which on the other hand, powerfully govern, invert, or change her.

Again ; among instances of power, or the invention of manual works of men, matters of dexterity, delusion, or diversion, are not to be rejected wholly : for some of them, though of small use, and only ludicrous, may yet be of information.

Lastly ; neither are superstitious, and those commonly called magical, matters, to be quite excluded : for although this kind lie strangely buried, and deep involved in fable and fable ; yet some regard should be had to discover what natural operation is concealed in the heap : for example, in fascination ; the power of imagination ; the sympathy and consent of things at a distance ; the communication of

from spirit to spirit, as well as from body to body ; like.

Accompanying and Hostile Instances (Instantiae us atque Hostiles); called also *Instances of Propositions*.

Subjunctive Instances; called also *Ultimate In-* or *Instances of the Terminus*.

Instances of Alliance or of Union.

Instances of the Cross (or Crucial Instances), taken from the crosses erected where two roads point out and declare their different directions ; so *Decisive and Judicial Instances*, and in some *stances of the Oracle and of Command*.

are of this kind, that when in the search of any nature, standing comes to an equilibrium, as it were, or stands as to which of two or more natures the cause of the required after should be attributed or assigned, by reason of frequent and common occurrences of several natures, the Crucial instances show the true and inviolable association of one of these natures to the nature sought, and the inseparable and separable alliance of the other, whereby the matter is decided, the former nature admitted for the cause, the other rejected.

These instances therefore afford great light, and have a kind of ruling authority, so that the course of interpretation will terminate in them, or be finished by them. Somewhat indeed, these Crucial Instances occur, or are found, whose already set down, but in general they are new, especially and purposely sought and applied, or after due endeavours, discovered, not without great diligence and industry.

Let the nature sought be the spontaneous motion of rotation ; particular, whether the diurnal motion, whereby the sun rises and sets, to the sight, be a true motion of rotation of the heavenly bodies, or only apparent in them, and real in the earth. The following may be a Crucial Instance in this matter.

If any motion, from east to west, is found in the air, though it be ever so languid and feeble, if the same motion be found somewhat quicker in the air, especially beneath the tropics, where, because of the larger circles, it will be perceptible, if the same motion be found brisk and

ation, may exist in nature. But if nothing of this kind can found, such a motion should not be embraced, but recourse had to other crucial instances about it.

Again ; suppose the nature sought was gravity, this will be cross-road. Heavy and ponderous bodies must either have a natural tendency to the centre of the earth, on account of their proper mechanism, or else be attracted by the corporeal mass thereof, as by a collection of bodies of the same nature, and so carried to it by consent.

If the latter be the cause, it will follow, that the nearer all heavy bodies approach to the earth, the stronger, and with the greater force and velocity they will tend to it ; but the farther they are from it, the weaker and the slower, and this to a certain distance ; whence, if they were removed so far from the earth, as that the virtue thereof could not act upon them, they would remain pendulous, like the earth itself, without falling.

And with regard hereto this may be a crucial instance. Take a clock that moves by weights, and another that moves by a steel spring ; let them be exactly adjusted, that neither of them may go faster than the other ; place the clock that goes by weights upon the top of some very high building ; keep the other below ; then carefully observe if the clock above goes slower than usual, on account of the diminished virtue of its weight. Let the same experiment be made in the deepest mines, to show whether such a clock will not move faster there, for the contrary reason ; and if the virtue of the weights shall be found diminished above, and increased below the surface of the earth, let the attraction of the terrestrial mass be received as the cause of weight or gravity.

15. *Instances of Divorce.*

Then follow five orders of Instances distinguished by the general name of *Instances of the Lamp*, or of *Primary Information* ; as being such as assist the senses. The first strengthen, enlarge, and rectify the immediate notions of the senses ; the second bring down the imperceptible to the perceptible ("non-sensibile ad sensibile") ; the third indicate the continuous processes or series of these things and motions which (as most frequently happens) are not observed except in their termination or exit course ("exitu aut periodis") ; the fourth substi-

tute something when the senses are in a state of destitution, the fifth excite the attention and regulate the senses, and at the same time limit the subject of things.

16. *Instances of the Door or of the Gate* (five *Portae*), which are those that assist the impressions of the senses. But among the senses, the place, in the furnishing of information, belongs to sight. And the helps that may be sought for the sight appear to be of three kinds, namely, such as may enable it to see either things not previously seen; or at a greater distance than previously; or more exactly and distinctly.

Of the first kind* are the newly invented microscopes which show the latent, and otherwise invisible smallness of bodies, and their secret textures and motions, rendered increased in the magnitude of the object, by means which exhibit the exact figure and lineaments of the body of the minute creatures, such as flies, fleas, mites, &c., as also colours and motions, before invisible, may be seen in a delightful and surprising manner† And here, as is usual in new and discoveries, a superstitious observation has crept into the minds of men, as if this invention of microscopes did honour the works of nature, but dishonour to the works of art, by making the one much finer than the other; whereas the truth is, that natural textures are much more subtle than artificial. For these microscopes are only of use in the case of min-

* Shaw omits a parenthesis here to the following effect:—"not to speak of spectacles (*bis-oculi*), and the like trifling devices, which are able only to correct and alleviate the infirmity of a vision not properly adjusted (*non bene disposita*), and therefore cannot be said to convey any additional information."

† Shaw here omits the following sentence:—"It is observed that a straight line drawn with a pen or pencil is discovered by such microscopes to be very unequal and tortuous; neither the motions of the hand, although assisted by the eye, nor the impression of ink or of colour, are in reality straight, although their inequalities are so minute that without the aid of such microscopes they cannot be perceived."

ta, so that if Democritus had seen them, he would perhaps have rejoiced, and imagined a way was now discovered for rendering the atoms visible, which he pronounced to be no object of sight.

But the unsuitableness and insufficiency of these microscopes, except for very minute bodies (and then only when such minute bodies are not parts of larger), destroy the use of the invention; which, if it could be extended to large bodies, to small particles of large bodies, in the piece, after the manner of making a piece of fine lawn appear like a net, so as that by this means the latent small particles and inequalities of gems, liquors, urine, blood, wounds, and many other things might be distinguished, great conveniences would doubtless arise from the discovery.

Of the second kind are telescopes, which were nobly attempted and discovered by Galileo; by means whereof, as by boats or little ships of intelligence, a nearer commerce may be opened and carried on with the celestial bodies. For by the help of these glasses, 1. The milky way appears to be a knot or cluster of little stars, perfectly separate and distinct, of which the ancients had but a bare suspicion. 2. And again, by their means it should seem that the planetary regions contain more stars besides the direct planets, and that the heavens may begin to be spangled with stars at a great distance below the sphere of the fixed stars, though with such only as are invisible without the help of telescopes. And again, 3. By their assistance we may behold the motion of those small stars, or satellites, about the planet Jupiter; from whence it may be conjectured that the revolutions of the stars have regard to several centres. 4. Again, by their means the luminous and opaque inequalities are more distinctly perceived and ascertained in the moon, from whence a geographical description might be made thereof. 5. And lastly, by means of these glasses, spots on the sun, and other things of that kind, appear to the sight; which are, doubtless, noble discoveries, so far as they may safely depended upon for real. But, indeed, I rather incline to suspect them, because experience seems wholly to fail in these few particulars, without discovering, by the same means, numerous others, equally worthy of search and enquiry.*

* Galileo, some of whose telescopic discoveries are noticed

17. *Summoning Instances (Instantiæ Citantes)*; or also *Evoking Instances*. Here Bacon introduces one of his favourite doctrines, that of the living principle or spirit, as he calls it, which he conceives to be contained even in bodies commonly considered to be dead.

Things escape the senses, either, 1, through the distance of the object, as to place; 2, through the interception of intervening bodies; 3, because the object is unfit to make an impression upon the sense; 4, because the object is not sufficient in quantity, to strike the sense; 5, because the time is not proportionate, so as to actuate the sense; 6, because the perception of the object is not endured by the sense; 7, and lastly, because an object before detained, and possessed the sense, and to leave no room for a new motion. . . .

But the reduction in the third and fourth ways regard numerous particulars, and ought on all sides to be collected in inquiries. Thus, for example, it appears that the air, the spirit, and things of that kind, which in their whole substance are light and subtile, can neither be perceived nor touched, whereas in the inquiry after such bodies, we must necessarily have reductions.

Suppose, therefore, the subjects of inquiry were the action and motion of the spirit included in tangible bodies; for every tangible body, with us, contains an invisible and intangible spirit over which the body is drawn like a garment. And hence arise those three powerful springs, and that wonderful process, of the spirit in tangible bodies. For, 1, the spirit being discharged out of a tangible body, the body contracts and dries; 2, when detained, it makes the body tender, supple, and soft; and, 3, being neither totally discharged, nor totally held in, it informs, fashions, assimilates, ejects, organizes, &c. And all these are rendered sensible by visible effects.

For in every tangible, inanimate body, the included spirit first multiplies itself, and, as it were, feeds upon those tangible

In this and two or three other passages in Bacon's writings should have been excepted from the enumeration, at p. 24, of his contemporaries whom he never mentions. Yet we see he had not nearly so much faith in the acumen or sagacity of the illustrious Florentine as in his own.

parts which are most disposed and prepared for that purpose : and thus digests, works, and converts them into spirit till at last they fly off together.

And this business of making and multiplying the spirit is brought down to the sense by the diminution of the weight of the body ; for in all drying, part of the quantity goes off, which is not only the spirit that pre-existed in the body, but a part of the body itself that was before tangible, and is now newly converted into spirit, for the pure spirit has no gravity.

The emission, or exit, of this spirit is rendered sensible by the rusting of metals and other corruptions and putrefactions of that kind, which stop before they come to the rudiments of life ; for in the more compact bodies the spirit finds no pores and passages through which to escape, and is therefore obliged to protrude the tangible parts, and drive them before it, so as to make them issue at the same time ; whence proceed rust, and the like.

But the contraction of the tangible parts, after some of the spirit is discharged, upon which dryness ensues, is made sensible by the increased hardness of the body, but much more by the subsequent cracking or splitting of the body, and the contracting, wrinkling, and overwrapping of the parts. Thus the parts of wood crack or split asunder, and are contracted : skins wrinkle, and if the spirit be suddenly forced out by the heat of fire, they shrink so fast as to curl and roll themselves up, &c.

On the other hand, where the spirit is detained, and yet dilated and excited by heat or something analogous thereto (as happens in the more solid or tenacious bodies), then the body is either softened, as in the case of ignited iron, or flows, as in melted metals, or liquifies, as in dissolved rosin, wax, &c. : therefore these contrary operations of heat, hardening some bodies and liquifying others, are easily reconciled ; because in the first case the spirit is driven out, but agitated and detained : in the second ; the latter being the proper action of heat and spirit, and the former the action of the tangible parts, succeeding upon the emission of the spirit.

But where the spirit is neither quite detained nor quite discharged, but only attempts and tries to force its prison, and readily meets with such tangible parts as will obey and yield to its motions, so that wherever the spirit leads they follow it, then it is that an organical body is formed, with its distinct

parts or limbs, and that, all the vital actions ensue, as well in animals as vegetables.

18. *Instances of the Road* (*Instantiæ Viæ*); called also *Itinerating* or *Journeying*, and *Articulated* or *Jointed Instances* (*Itinerantes et Articulatæ*)

19. *Instances of Supplement*, or of *Substitution*, called also *Instances of Refuge* (*Instantiæ Refugii*).

20. *Lancing Instances* (*Instantiæ Persecantes*), *Instances of Democritus*; called also, for a different reason, *Twitching Instances* (*Instantiæ Vellicantes*). To which are to be subjoined those called the *Limits of the Lancing* (*Metæ Persecationis*), the consideration of which, however, is deferred to the head of the Supports of Induction (intended to form the next part of the treatise).

Such are the instances which assist the senses: the rest that remain are principally of use for operation or practice ("ad partem operativam"). They are seven in number, and are called by the general name of *Practical Instances*. Now there are two defects in practice. The one, either deceives, or it imposes too much trouble ("one nimis"). It deceives from the forces and activities of bodies being ill determined and measured. Now the forces and activities are circumscribed and measured in four ways; namely, by place, or by time, or by union of quantity ("per unionem quanti"), or by predominance of virtue. The four corresponding classes of instances are called *Mathematical Instances*, or *Instances of Measure*. Practice again is troublesome, either on account of the intermixture of useless things, or on account of the multiplication of instruments, or on account of the bulk of the material and of the substances which may be required for any work. The instances, therefore, that are to be prized here are such as either direct operation to those things which are of most consequence to mankind, or lessen the number of instruments, or the quantity of material. Hence three classes of instances, which are called by the general name of *Propitious* or *Beneficent Instances*.

21. *Instances of the Rod or Radius* (*Virgae sive Radii*); called also *Instances of Endurance* (*Perlativnis**), or of *No Farther* (*Non Ultra*).

22. *Instances of the Course* (*Curriculi*); called also *Water Instances* (*Instantiae ad Aquam*), from the water-clocks of the ancients. These are instances of the measuring of things by time. Under this head Playfair observes that Bacon, after remarking that every change and every motion requires time, has the following very curious anticipation of facts, which appeared then doubtful, but which subsequent discovery has ascertained:—
 ‘The consideration of these things produced in me a doubt altogether astonishing, namely, whether the face of the serene and starry heavens be seen at the instant it really exists, or not till some time later; and whether there be not, with respect to the heavenly bodies, a true time and an apparent time, no less than a true place and an apparent place, as astronomers say, on account of parallax. For it seems [Bacon’s word is *videbatur*—*it seemed*] incredible that the species or rays of the celestial bodies can pass through the immense interval between them and us in an instant, or that they do not even require some considerable portion of time.”—“The measurement of the velocity of light,” Playfair subjoins, “and the wonderful consequences arising from it, are the best commentaries on this passage, and the highest eulogy on its author.” Bacon, however, immediately proceeds thus:—

But this suspicion, as to any great interval betwixt the real and apparent time afterwards vanished, upon considering that infinite loss and diminution of quantity, as to sight, between the real body of a star and the apparent object, which difference is caused by the distance; and, at the same time, considering how what a distance objects that are barely white may, of a sudden, be seen here below, amounting to sixty miles at the least; for there is no question but that the light of the celestial bodies

* Shaw translates *Permeating Instances*; Mr. Wood, *Instances of Completion*.

has not only the vivid strength of which exceeds the light of flame, as we find in the strength of radiancy. Nay, that manner in which gross matter moves, in the diurnal rotation, is a wonderfully swift motion of the rays of light, more probable. But what has the great use of this, that if there should here be any comparison between reality and sight, or the existence of things being seen, it must then happen that the objects are frequently intercepted and confounded by the mean time, or by the like disturbances, so that there is then much for the simple mensuration of

23. *Instances of the How Much* (also called also *Doses of Nature* (*Doses*).

24. *Instances of Struggle* (also called also *Instances of Predominance*. It rates and illustrates at great length the motions and active virtues or powers which he makes to be, 1. Motion of Rest; 2. Of Connexion (*nexus*); 3. Of Matter (*hyles*); 4. Of Continuity; 5. Of Acquisition (*ad lucrum*), or Of Loss; 6. Of Greater Congregation; 7. Of Motion; 8. The Magnetic Motion; 9. (*fugae*); 10. Of Assimilation, or Simple Generation; 11. Of Excitation; 12. Of Configuration or Penetration (*Per-transitus*), or to the Passages (*secundum meatus*); 13. Political Motion (by which the parts in any body bridle, conquer, sublate the rest, and compel them to stand still, to move, to take their place, their own inclinations, but with a view to the whole, may be most conducive to the well-being of the part), 14. The Spontaneous Motion, its nine different species, all likewise; 15. Of Trepidation; 16. Of Repose (*ad quiescentiam*); 17. Of Motion (*exhorrentiae motus*).

25. *Prompting Instances* (also called

26. *Many-sided Instances* (*Instantiæ Polychrestæ*, literally *Instances of many uses*.) The ways in which man acts upon natural bodies (besides their mere application to and removal from one another), are stated to be seven: 1. By the exclusion of whatever impedes or disturbs; 2. By compressions, extensions, agitations, and such like; 3. By heat and cold; 4. By detention in a suitable place; 5. By checking and regulating motion; 6. By means of special agreements, or sympathies, in things (*consensus*); 7. By a temperate and due alternation, and a series and succession of all these ways. These seven methods are all illustrated at great length.

27. *Magical Instances*; being those in which the matter or efficient cause is slight or small in comparison of the magnitude of the work or effect produced.

And so much for the subject of prerogative instances. It must be observed, that in this our new machine for the understanding, we deliver a logic, not a philosophy: but as our logic directs the understanding, and instructs it, not like the common logic, to catch and lay hold of abstracted notions, as it were by the slender twigs, or tendrils, of the mind; but really enters and cuts through nature, and discovers the virtues and actions of bodies, together with their laws, as determined in matter; so that this knowledge flows not only from the nature of the mind, but also from the nature of things, and the universe; hence it is no wonder that, in order to give examples and illustrations of our art, we every where employ physical considerations and experiments. . . .

And now we should proceed to the helps and rectifications of induction, then to concretes, latent processes, concealed structures, &c., as mentioned in order under the Twenty-first Aphorism; that at length, like faithful guardians, we might possess mankind of their fortunes, and release and free the understanding from its minority, upon which an amendment of the state and condition of mankind, and an enlargement of their power over nature, must necessarily ensue. For by the fall man at once forfeited his innocence and his dominion over the creatures, though both of them are, in some measure, recoverable, even in this life: the former by religion and faith, and the latter by arts and sciences. For the world was not

made absolutely rebellious by the curse, but, in virtue of the denunciation, "In the sweat of thy brow shalt thou eat the bread," is at length, not by disputes or indolent magical ceremonies, but by various real labours, subdued and brought to some degree to afford the necessaries of life.

END OF VOL. II.

ERRATA IN VOL. I.

Pages 119, 139, 153, read "Blackbourne."

Page 161, note ; insert semicolon after "minuteness of detail," line 9 from bottom ; and after "in half a page," line 8 from bottom.

Page 162, note ; insert semicolon after "the Second volume," line 6 from bottom.

Page 168, line 12 from bottom, for 1628, read 1625.

Page 214, note ; insert — after "before that year," line 6 from bottom.



B A C O N;
H I S W R I T I N G S
AND
H I S P H I L O S O P H Y.

BY GEO. L. CRAIK, M.A.

IN THREE VOLUMES.

VOL. III.

L O N D O N :

J. COX, 12, KING WILLIAM STREET, STRAND.

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C O N T E N T S.

Bacon's Philosophical Works, continued. —

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P A R T I I.

CON'S PHILOSOPHICAL WORKS.

IV.—THE REMAINDER OF THE INSTAURATION
A, AND THE OTHER PHILOSOPHICAL WRITINGS.

Six Parts of which the *Instauratio Magna* was
t,* not one was left by Bacon in a completed
The treatise *De Augmentis Scientiarum* is merely
ute for the First; the *Novum Organum*, which
orm the Second, is unfinished;† and of the re-
Parts we have only some portions and fragments.

now proceed to give an account of the several
which the Third Part of the *Instauratio* is com-
s they are commonly arranged.

head is placed a short Latin Dedication to Prince
, then heir to the crown, afterwards Charles I.,
as originally prefixed to the 'Historia Naturalis
erimentalis ad Condendam Philosophiam,' pub-
n 8vo., in 1622, by Bacon himself, designated
the Third Part of the *Instauratio Magna*, but
ng only the *Historia Ventorum* (or History of
ids), the first of six similar histories or inquiries
ich it was designed to include.‡ Of this volume,
now scarce, a very neat re-impression, in 12mo.,
n certain other tracts were also included, was pro-
t Leyden in 1638; and there is an English trans-
f the entire contents of this latter volume "by
Gent." originally printed, in 12mo., at London,
, and reprinted in the Second Part of the *Re-*
o, 1670. The principal portion of the volume
ee Vol. ii. p. 25. † See Vol. ii. p. 214.

‡ See Vol. ii. p. 6.

of translations by R. G. has also been adopted by Montagu. Shaw has, with unaccountable care, given the *History of the Winds* and what we call other similar Histories as portions of the *Instauratio*, nowhere, as far as we know, even deigning to notice Bacon's own expression that they belong to Part Third. In the Prince Charles, Bacon describes what he calls the first fruits of his intended Natural History (*Historiæ nostræ Naturalis*); and he says, as it were by a vow, that he shall publish (edituros), one or more of the other according as the subjects may be more or less extensive. Others, he hopes, may perhaps follow his example to the like industry.

Then follows, in the common arrangement, Part of the *Instauratio*, a short treatise on the *Parascene* (more properly printed *Parascenæ* *Naturalis* et *Experimentalem*) (the Natural and Experimental History), published at the end of the 'Novum Organum' in 1620. There is a translation of it in the *Resuscitatio*, by a writer who has placed at the end of a short address to the reader, considers the *Parascenæ* as an introduction to the *Sylvarum*. Another translation, by Mr. Montagu, is given by Mr. Wood, who has placed at the end of a short address to the reader, considers the *Parascenæ* as an introduction to the *Sylva*.

In a second or extended title, 'Description of Natural and Experimental History', may be sufficient in itself, and may be sufficient in itself, and in the introduction Bacon explains the nature of his *Instauratio* in portions, at least may be placed out of the context, has induced him to add to the present Description and Delineation.

mental History, embracing materials for the Work of the Interpreter (*Opus Interpretis*), which is to follow it. Its proper place, it might be thought, would rather be when he should have come in the order of his inquiry to the Preparatives.

But it seems to us a wiser part (he proceeds, in the version of W. W.), rather to anticipate it than to tarry for its proper place, because that such an history, as we design in our mind, and shall presently describe, is a thing of exceeding great weight; nor can it be compassed without vast labour and charges, as that which stands in need of many men's endeavours; and, as we have elsewhere said, is a work truly regal. Wherefore we think it not amiss to try, if happily these things may be regarded by others; so that while we are perfecting in order those things which we design, this part, which is so various and burdensome, may in our lifetime, if so it please the Divine Majesty, be provided and prepared, others adjoining their labours to ours in this occasion; especially seeing that our strength, if we should stand under it alone, may seem hardly sufficient for so great a province: for, as for the business itself of the intellect, possibly we shall be able to conquer that with our own strength; but the materials of the understanding are of so large an extent, that those must be gained and brought in from every place, as it were by factors and merchants. Besides we esteem it as a thing scarce worthy our enterprise, that we ourselves should spend time in such a business as is obtainable by almost all men's industries. But that which is the main of the business we will now ourselves perform, which is to propound diligently and exactly the manner and description of such a sort of history as may satisfy our intention, lest men, not being admonished, should loiter out their times, and order themselves after the example of the *Natural Histories* now in use, and so should stray far from our intention.

First, then, he proposes to give some general precepts for the compiling of a History of this kind, and then to say a particular figure, or exemplification, of it before the eyes of men. Such a History he is wont to call First History, or Mother History.

The remainder of the treatise is digested into ten Aphorisms. They comprise, however, only the general

precepts, and contain scarcely that is not to be found in the *Organon* or the *De Augmentis*.

But the *Aphorisms* are followed along with the *Novum Organum* 'Catalogue of Particular Historical Chapters' (*Catalogus Historicarum Capitula*), which may be the particular figure of First Part. The introductory remarks to the Part is divided from the *Aphorisms*. The paging runs on, the blank leaf is not numbered. The Catalogue, by W. W. in his translation. Mr. W. C. a translation of it by Mr. W. C. given by Snaw in his *Introduction*. The *Histories* enumerated, namely, 21 to which no heading all relate to the elements, constitution and processes of General Nature of the Greater Masses, 15 of Histories of Man (including &c.), and 2 of Mathematical Figures).

The next tract is a fragment had been entitled 'Abecedarium bet of Nature). It was first printed in the *Baconiana* (1679), along with the *Introduction*. In his *Introduction* Ten *Abecedarium* was commonly said, "nigh so, the latter part of it of work," he adds, "is said to be but it is not so in the strictest sign is the partition of things in a design which his Lordship brought in his *Organon* and book *De* And, though in it were handled

lordship giveth express caution in his book of *Advancement* that, where he speaks of conditions of entities which are called transcendental (such as *Much, Little, True, False, Same, Diverse, Possible, Impossible*), he be not interpreted in a logical, but physical sense. His lordship was much averse to high and useless speculations, and was wont to express that averseness in the following comparison:—The lark, said he, is an high flyer, and in its flight does nothing but sing; but the hawk flies high, and thence descends and catches its prey. It is not possible, however, to make much, or almost anything, of this fragment. It begins by an enumeration of six Inquisitions respecting the Greater Masses of Nature, which are designated by the six last letters of the Greek Alphabet. What follows about the Conditions of Entities, the Form of the Alphabet, &c., seems to be little more than an undigested miscellany of hints.

Next, in the arrangement of the Third Part of the *Instauratio*, is inserted, as a Preface to the Natural History, a discourse first published in Gruter's collection (1653) as the Preface to a number of pieces entitled by him 'Phænomena Universi, sive Historia Naturalis ad Condendam Philosophiam,' and forming a portion of what he calls the *Impetus Philosophici*. A few sentences of it are translated by Shaw in the Introduction to the *Sylva*. Bacon here points out the necessity of a correct and comprehensive natural history—that is, a well-arranged collection of facts, ascertained whether by observation or experiment, appertaining to every department of nature—as the only possible foundation on which to erect a true philosophy; and inveighs against the various defects of such collections of this kind as have hitherto been formed. This is done with great copiousness of illustration and felicity of expression; but the considerations dwelt upon and the general strain of the reasoning are for the most part the same as in the *Augmentis* and the *Novum Organum*. With regard to his own collections of natural facts, the most usual course he observes, would be to begin with the phenomena of the air; but he, remitting nothing of the severity of

system, will first take in hand those things which constitute or relate to that more general nature of which either globe is participant. He will begin, then, with the history of bodies according to that of which seems the most simple: namely, the paucity of matter contained and extended within the same space or boundary. For, whilst among affirmations respecting nature there is none more than the twin proposition, that nothing can come from nothing, nor anything be reduced to nothing, the actual quantity of nature, or universal sum of it, is unalterably permanent and constant, and cannot mean be either increased or diminished; this at least is certain, although it has not been so distinctly or asserted (whatsoever men may be wont to fall into) the equable power of matter in regard to form. Of the actual quantity of matter, more or less is contained within the same dimensions of space according to the diversity of the bodies by which the said space is occupied, some bodies being evidently more compact than others more extended or diffused.* Thus a hollow does not contain equal portions of matter when it is filled with water and when it is filled with air: more in the one case, and less in the other. Therefore, if any one should assert that from a certain quantity of water an equal mass of air could be produced, it would be the same as if he should say that something is produced out of nothing. From all this, and more that follows, it would appear that, when he wrote the present Preface, Bacon's intention was to connect his Natural History with the treatise entitled *Historia et Rari* (the History of Density and Rarity) which, however, has escaped the attention of all his editors.

Next, in the common arrangement of the Tables of the *Instauratio Magna*, we have the Lists of the Histories and Inquisitions designed by Bacon for the six months during which he was to employ himself.

* All the editors of Bacon's works, following Greaves, have printed this passage in such a manner as to make it illegible, dividing what is evidently one sentence into two.

compiling his body of Natural History, as it is printed in the volume containing the *Historia Ventorum* (1622) immediately after the Dedication. The six Histories are : 1. The History of the Winds ; 2. The History of Density and Rarity, and of the Coming together and Expansion of Matter in Spaces ; 3. The History of Gravity and Levity ; 4. The History of the Sympathy and Antipathy of Things ; 5. The History of Sulphur, Mercury, and Salt ; 6. The History of Life and Death. But this order, although it has been followed by the editors of the *Instauratio*, is evidently founded upon no scientific principle, nor has it been anywhere announced by Bacon as the order which he meant to adopt in the final arrangement of the work ; it is merely the order in which he proposed to execute certain portions of it. Nor are these six Histories by any means all of which the work was to consist.

The list of the Six Histories is followed, as in Bacon's own publication of 1622, by another discourse upon the general subject of Natural History. A small portion of this disquisition also is inserted by Shaw in the middle, which he gives us as the Introduction to the *Sylvarum Sylvarum*. It is given in full in R. G.'s translation of the 'History of the Winds, &c.' (1653 and 1670). Bacon here observes that in early times the world swarmed with theories or rather fables professing to be systems of the universe, and that even in later days, although the speculations of men had been somewhat more restrained by the discipline of schools and colleges, such fanciful system-making had by no means altogether ceased ; witness Patricius, Telesius, Brunus, Severinus, the Dane, Gilbert the Englishman, Campanella, all of whom had advanced upon the stage, and produced their new fables, although they had neither been greeted with much applause nor distinguished by any great elegance of construction.

But of late (he proceeds, as the substance of the passage given by Shaw), by the doctrine of certain learned men, joined perhaps with some dislike of the former licentiousness and difference in opinions, the sciences are confined to a few pa-

authors; and in this confinement impose upon the old
 prejudice the young, insomuch that everything is trans-
 mitted as it were by an edict; and authority goes for truth, not
 for authority. This kind of discipline, however useful
 for the present yet certainly excludes and banishes
 better things. Indeed we all experience and imitate
 of our first parents, they would be as gods. but we go
 for we will be creating new worlds, ever going before
 ordering it over nature, and would have all things be as
 best to our own folly, not to the divine wisdom, or as
 in nature. And it is a question whether we distort
 or our own minds the most, but we certainly stamp the
 of our own image upon the creatures and works of God,
 of carefully inspecting and acknowledging the seals of
 creator; whence it is but just that we are again fallen from
 empire over the creation, and thus, though after the first
 man had still some dominion left him over the rebellious
 crea, so as by true and solid arts to subdue and bend them
 purpose, yet, by our pride and desire of being like God,
 following the dictates of our own reason, we have in great
 are lost it; therefore if we have any humility towards the
 god, if we have any reverence and esteem of his works, if
 we any charity towards men, or any desire of relieving
 miseries and necessities, if we have any love for natural
 as any aversion to darkness, and any desire of purifying
 understanding, mankind are to be most affectionately
 cited and beseeched to lay aside, at least for a while, their
 erroneous, fantastic, and hypothetical philosophies, which
 led experience captive, and childishly triumphed over
 works of God, and now at length condescend, with due
 honour and veneration, to approach and peruse the volume
 of creation, as well as me time upon it, and, bringing to the
 a mind well purged of opinions, idols, and false notions,
 be familiarly therein. This volume is the language
 which has got out to all the ends of the earth, unaffected by
 confusion of Babel, this is the language that men should
 ought to learn, and not disdain to have its alphabet per-
 fectly in their hands, and in the interpretation of this lan-
 guage they should spare no pains, but strenuously proceed,
 persevere, and dwell upon it to the last.

To promote this capital end we are willing to leave, for the
 present, many principal parts of our Natural Organum, or new
 unfinished, as choosing to set on foot and promote all

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s of our Instauration rather than to perfect a few of them ; is ardent and constant desire, that what was never attempted before may not now be attempted in vain. We have also read that though doubtless there are spread over Europe numbers of extensive, free, sublime, penetrating, solid, talented geniuses, some whereof may perceive and perhaps understand the scope and use of our new logic, and yet not know how to proceed and apply themselves to real philosophy. If philosophy depended upon the reading of philosophical books, or the force of thought, they might be abundantly qualified for it, but, as we refer them to the history of nature and experiments of arts, they may stick here as at a thing unprofitable, or requiring too much time and expense, whilst we desire any one should quit his former knowledge before he is in possession of better. But after a faithful and complete history of nature and arts shall be collected, digested, corrected, and opened to mankind ; there are hopes that such geniuses as those above mentioned, who both in ancient and modern times have been so ready and expert, as by wonderful industry and workmanship to build systems of philosophy from loose materials, will not fail to raise more solid structures composed of good and sound materials for the purpose ; and though they should choose to proceed in the old way rather than in that laid down by our new logic, which appears rather the only one or the best for the purpose ; so that the whole, though our new logic were perfected, yet it will not greatly promote the re-establishment of the sciences without the natural history we speak of, whilst this history may greatly promote the same end without the aid of our new logic ; and therefore we judge it most expedient, first, and above all things, to endeavour at procuring a complete history.

is followed by what is entitled *Norma Historiarum* (The Rule or Method of the Present History) by which, however, it is plain that we are to understand, not the History of the Winds, but the proper Natural and Experimental History in its whole extent. Bacon here says, to adopt the translation of
:—

the titles comprehended in the catalogue, which belong to Concretes, we have added the titles of the abstracts ; of which, as of a reserved history, we made mention

in the same place. These are the various figurations of matter or forms of the first classes, simple motions, sums of motions, measures of motions, and some other things, of the which we have made a new alphabet and placed it at the end of the volume. We have taken titles (being no way able to take them all), not according to order, but by choice, those, namely, the inquiry of which, either for use was most of weight, for abundance of experiments most convenient, or for the obscurity of the thing most difficult and noble, or by reason of the discrepancy of titles among themselves most open to examples. In each title, after a kind of an entrance or preface we presently propound certain particular topics or articles of inquiry, as well to give light to the present inquiry as to encourage a future. For we are masters of questions, but not of things; yet we do not in the history precisely observe the order of questions, lest that which is for an aid and assistance should prove a hinderance.

He then describes the manner in which he proposes to expound the several subjects, and concludes: "It appears from what has been stated that the present History will not only serve in place of the Third Book of the *Instauration*, but will be a preparation by its means to be despised for the Fourth, by means of the Titles from the Alphabet and the Topics: and for the Sixth, by means of the greater observations, comments and canons." But it is to be remembered that the scheme thus laid down was never more than very partially executed, in particular, of the *Novum Abecedarium*, or New Alphabet, which is spoken of as placed at the end of the volume, we have only the fragment printed by Tenison; the volume at the end of which it was Bacon's intention that it should stand was the volume of his general Natural and Experimental History. The modern editors of the *Instauration* appear to have quite overlooked all this.

The 'History of the Winds,' to which we now come occupies about 240 widely printed octavo pages in the original edition of 1622. It has been translated both by R. G. and by Shaw, who, however, as already noticed, has chosen to place it and the other Histories in the Fourth Part of the *Instauration*.

Like the other Histories, it commences with what Bacon calls an *Aditus*, literally an Entry or Avenue, by way of preface or introduction. The *Aditus* is thus rendered by Shaw :—

The winds may be called the wings of mankind; by means whereof men fly through the sea, and maintain traffic and correspondence with all the parts of the globe. They are also the sweepers of man's habitation, the earth; and at the same time brush and cleanse the air about it. On the other hand they sometimes tear up and enrage the sea, that would otherwise remain quiet or undestructive, and have likewise other mischievous effects. Again, they produce strong and violent motions without human assistance; and thus, as servants to mankind, drive our ships and turn our mills. They might also be applied to abundance of other useful purposes, if men would exert their diligence. The nature of the winds is usually reckoned an occult and secret thing; and no wonder, whilst the nature and power of the air, which the winds administer to and wait upon (as, in the language of the poets, Æolus does on Juno), remain absolutely unknown. They are not primary creatures, or of the first six days' work, as to their action, no more than the other meteors, but were produced later in the order of creation.

Then are set down what are called *Particular Topics*, that is, articles of inquisition, or questions, relating to the Winds. Thirty-three questions are enumerated in all; and the remainder of the treatise consists of facts having reference to these questions, arranged under heads, and interspersed, though sparingly, with occasional observations. It will suffice for our purpose to subjoin a few of the more notable of these facts, in doing which we shall avail ourselves of R. G.'s not very polished, but generally intelligible enough translation :—

There are some whole countries where it never rains, or at least, very seldom; but there is no country where the wind doth not blow, and that frequently.

In our seas in Europe, when it is fair dry weather, and no particular winds stirring, there blows a soft kind of gale from the east, which followeth the sun.

Those who will not have Columbus to have conceived such a strong opinion concerning the West Indies by the relation of

a Spanish pilot, and much less believe that he might gather out of some obscure footsteps of the ancients, have this refuge, that he might conjecture there was some continent in the way by the certain and stayed winds which blew from them toward the shores of Lusitania, or Portugal - a doubtful and not very probable thing, seeing that the voyage of winds will hardly reach so large a distance. In the mean time there is great honour due to this inquisition, if the finding of this new world be due to one of those axioms or observations, whereof it comprehends many.

Wheresoever are high and snowy mountains, from thence blow stayed winds until that time as the snow be melted away.

I believe also that from great pools which are full of water in the winter, there blow stayed winds in those seasons, when they begin to dry up with the heat of the sun, but of this I have no certainty.

Wheresoever vapours are engendered in abundance, as that at certain times, be sure that stayed winds will blow there at the same times.

If stayed and certain winds blow anywhere, and the cause cannot be found near at hand, assure yourself that those certain winds are strangers, and come from far.

It hath been observed that stayed winds do not blow in the night-time, but do rise about three hours after sun-rising. Surely such winds are tired, as it were, with a long journey, that they can scarcely break through the thickness of the night air, but being stirred up again by the rising of the sun, they go forward by little and little.

The word of attending winds is ours, and we thought good to give it, that the observation concerning them be not lost nor confounded. The meaning is this: divide the year, if you please (in what country soever you be), into three, four, or five parts; and if any one certain wind blow there, two, three, or four of those parts, and a contrary wind but one; we call that wind which blows most frequently the customary or attending wind of that country, and likewise of the times.

Injunction. Humane diligence hath almost ceased and stood still in the observation of attending winds in particular places, which, notwithstanding, should not have been, that observation being profitable for many things. I remember I asked a certain merchant (a wise and discreet man) who had made a plantation in Greenland, and had wintered there, why the country was so extreme cold, seeing it stood in a reasonable

ate climate. He said it was not so great as it was reputed that the cause was two-fold. One was, that the and heaps of ice which came out of the Scythian sea, carried thither. The other (which he also thought to be the reason), was because the west wind there blows many of the year more than the east wind, as also, said he, it is with us: but there it blows from the continent, and cold, and us from the sea, and warmish; and, said he, if the wind should blow here in England so often and constantly the west wind does there, we should have far colder weather, equal to that as is there.

When the south wind blowing, the sea becomes blue, and more than when the north wind blows, which causes it to look and blacker.

There is a northern wind when you sow seed, neither would any one to inoculate or graft in a southern wind.

Fruit falls from trees soonest on the south side; but vine and stalks bud forth and grow most that way.

Winds are hurtful to wheat and all manner of grain at three times, namely, at the opening and at the falling of the flower, when the grain itself is ripe; for then they blow the corn from the ear, and at the other two times either they blast the corn or blow it off.

When the south wind blows, men's breath grows ranker, all men's appetites decay, pestilent diseases reign, men wax slow and dull. But when the wind is northwardly, men are lively, healthful, and greedy after food. Yet the north wind is hurtful for them that are troubled with the cough, gout, or any other sharp fluxions.

The eastern wind all things visible appear bigger; but in the north wind all audible things are heard further, as sounds and the like.

The east-north-east wind draws clouds to it. It is a proverb of the Greeks to compare it to usurers, who by laying money do swallow it up. It is a vehement and large wind which cannot remove clouds so fast as they will turn and press upon it, which is likewise seen in great fires, which grow stronger against the wind.

Winter winds are far more drying than summer winds, inso-much that such as make musical instruments will stay for winter winds to dry the stuff they make their instruments of, so that it is more porous and better sounding.

Wales, in the county of Denbigh, a mountainous and

rocky country, out of certain caves (as Gilbertus relateth) such vehement eruptions of wind, that clothes or linen laid there upon any occasion are blown up and carried a great way up into the air.

In Aler Barry, near Severn, in Wales, in a rocky cliff, certain holes, to which, if you lay your ear, you shall hear divers sounds and murmurs of winds under ground.

Acosta hath observed that the towns of Plata and Potosa, in Peru, are not far distant one from the other, and both situated upon a high and hilly ground, so that they differ not in the air. And yet Potosa hath a cold and winter like air, and Plata hath a mild and spring-like temperature, which difference seems may be attributed to the silver mines which are near Potosa; which sheweth that there are breathing-places of the earth, as in relation to hot and cold.

There are certain wells in Dalmatia and the country of Cyrene (as some of the ancients record), into which if you cast a stone, there will presently arise tempests, as if the stone had broken some covering of a place in which the force of the wind was enclosed.

It hath been observed that there is a murmuring of wind before we do plainly perceive the winds, whereby it is conjectured that the wind descends from a higher place; which is likewise observed in hills (as we said before), but the cause is more ambiguous by reason of the concavity and hollowness of the hills.

Wind follows darted or (as we call them, shooting stars, as it comes that way as the stars hath shot, whereby it appears that the air hath been moved above before the motion comes to us.

Small stars are not seen before the rising of winds, though the night be clear and fair; because, it should seem, the air grows thick, and is less transparent by reason of that matter which afterward is turned into wind.

The rainbow, which is, as it were, the lowest of meteors and nearest to us, when it doth not appear whole, but cut off, and, as it were, only some pieces of the horns of it dissolved into winds as often or rather oftener than into rain.

There arise many great and strong winds some hours before the eclipse of the moon: so that if the moon be eclipsed in the middle of the night, the winds blow the precedent evening; if the moon be eclipsed towards the morning, then the winds blow in the middle of the precedent night.

It is reported here in England, that, in those days that Gascoigne was under our jurisdiction, there was a petition offered to the king by his subjects of Bordeaux and the confines thereof, desiring him to forbid the burning of heath in the counties of Sussex and Southampton, which bred a wind towards the end of April which killed their vines.

It is thought that the sound of bells will disperse lightning and thunder; in winds it hath not been observed.

Pliny relates that the vehemence of a whirlwind may be allayed by the sprinkling of vinegar in the encounter of it.

It is reported of Mount Athos, and likewise of Olympus, that the priests would write in the ashes of the sacrifices which lay upon the altars built on the tops of those hills, and when they returned the year following (for the offerings were annual) they found the same letters undisturbed and uncanceled, though those altars stood not in any temple, but in the open air; whereby it was manifest that in such a height there had neither fallen rain nor wind blown.

They say that on the top of the Peak of Teneriffe, and on the Andes betwixt Peru and Chili, snowlieth upon the borders and sides of the hills, but that on the tops of them there is nothing but a quiet and still air, hardly breathable by reason of its tenuity: which also, with a kind of acrimony, pricks the eyes and orifice of the stomach, begetting in some a desire to vomit, and in others a flushing and redness.

If the south wind begin to blow two or three days, sometimes the north wind will blow presently after it. But if the north wind blows as many days, the south wind will not blow until the wind have blown a little from the east.

When the year is declining, and winter begins after autumn is passed, if the south wind blows in the beginning of winter, and after it comes the north wind, it will be frosty winter. But if the north wind blow in the beginning of winter and the south wind come after, it will be a mild and warm winter.

Pliny quotes Eudoxus to show that the order of winds returns after every four years, which seems not to be true, for revolutions are not so quick. This, indeed, hath been by some men's diligence observed, that greatest and most notable seasons (for heat, snow, frost, warm winters, and cold summers) for the most part return after the revolution of five-and-thirty years.

It hath been seen sometimes at sea that winds have come from contrary parts together, which was plainly to be perceived

by the perturbation of the water on both sides, and the calmness in the middle between them; but after those contrary winds have met, either there hath followed a general calm of the water everywhere, namely, when the winds have been equal and quelled one another equally, or the perturbation of the water hath continued, namely, when the stronger wind hath prevailed.

In our greatest Britain ships (for we have chosen those for our pattern) there are four masts, and sometimes five, set one behind the other, in a direct line drawn through the middle of the ship, which masts we will name thus:—

The main mast, which stands in the middle of the ship, the foremast, the mizenmast (which is sometimes double), and the spritmast.

Each mast consists of several pieces, which may be lifted and fastened with several knots and joints, or taken away; some have three of them, some only two.

The spritsail mast from the lower joint lies bending to the sea, from that it stands upright; all the other masts stand upright.

Upon the masts hang ten sails, and when there be three mizenmasts, twelve; the mainmast and foremast have three tiers of sails, which we will call the mainsail, the topsail, and the maintopsail; the rest have but two, wanting the maintopsail.

The sails are stretched out across near the top of every part of the mast by certain beams which we call yards, to which the upper parts of the sails are fastened, the lower parts are fastened with ropes at each corner, the mainsails to the sides of the ship, top and maintopsails to the yards which are set below them.

The yard of every mast hangs across, only the yards of the mizenmasts hang sloping, one end up and the other down; in the rest they hang straight across the masts like unto the letter T.

The mainsails of the mainmast, foremast, and bowsprit are of a quadrangular parallelogram form, the top and main sails somewhat sharp, and growing narrow at the top: but the top mizen sails are sharp, the lower or main sails triangular.

In a ship of eleven hundred ton, and which was one hundred and twelve foot long in the keel, and forty in breadth in the hold, the mainsail of the mainmast was two-and-fifty foot deep and eighty-seven foot broad.

The topsail of the same mast was fifty foot deep, and eighty-foot broad at the bottom, and forty-two at the top.

The maintopsail was seven-and-twenty foot deep, and two-and-forty broad at the bottom, and one-and-twenty at the top.

The foremast mainsail was forty foot and a half deep, and sixty-two foot broad.

The topsail was six-and-forty foot and a half deep, and sixty-foot broad at the bottom, and six-and-thirty at the top.

The maintopsail was four-and-twenty foot deep, six-and-ty feet broad at the bottom, and eighteen foot at the

The mizen mainsail was, on the upper part of the yard, and-fifty foot broad; in that part which was joined to the l, seventy-two foot: the rest ending in a sharp point.

The topsail was thirty feet deep, fifty-seven foot broad at the om, and thirty foot at the top.

If there be two mizenmasts, the hindermost sails are less than the foremost about the fifth part.

The mainsail of the bowsprit was eight-and-twenty foot deep a half, and sixty foot broad.

The topsail five-and-twenty foot and a half deep, and sixty broad at the bottom, and thirty at the top.

The proportions of masts and sails do vary, not only according to the bigness of ships, but also according to the several uses for which they are built: some for fighting, some for merchandize, some for swiftness, &c. But the proportion of the tension of sails is no way proportioned to the number of tons whereof the ships consist, seeing a ship of five hundred tons or more may bear almost as large a sail as the other whereof the weight is half, which was almost as big again. Whence it proceeds that lesser ships are far swifter and speedier than great ones, not only by reason of their lightness, but also by reason of the tension of their sails in respect to the body of the ship; for, to continue that proportion in bigger ships would be too vast and impossible a thing.

By this motion of the winds in the sails of ships (if it be a strong and prosperous gale) a merchant's ship may sail six or seven Italian miles in four-and-twenty hours; for there are many packet-boats which are built a purpose for swiftness (that are called Caravels) which will go further. But when the wind is clean contrary, they fly to this last refuge, and a very weak one, to go on their course, namely, to proceed sideways, as the wind will suffer them, out of their course, then

turn their way again towards their course, and so proceed in an angular way, by which progression (which is less creeping, for serpents creep on by crooked turnings, but make angles) they may in four-and-twenty hours go five miles' journey. By long observation, the fifth day of moon is feared by mariners for stormy.

If the new moon do not appear before the fourth day, it shows a troubled air for the whole month.

If the new moon, at her first appearance or within a few days after, have its lower horn obscure or dusky, or any blemished, it signifies stormy and tempestuous days before full moon; if it be ill coloured in the middle, tempests come about the full of the moon; if it be so about the upper part of the horn, they will be about the decreasing of the moon.

If at the fourth rising the moon appear bright, with horns, not lying flat, nor standing upright, but in a middle kind of posture between both, it promises fair weather for the most part, until the next new moon.

If at the same rising it be red, it portends winds; if dark or black, rain, but, howsoever, it signifies nothing beyond full moon.

An upright moon is almost always threatening and bad, but it chiefly portends winds; but if it have blunt horns, as it were, cut off short, it rather signifies rain.

If one horn of the moon be sharp and the other blunt, it signifies wind; if both be blunt, rain.

If a circle or halo appear about the moon, it signifies rather that wind, unless the moon stands directly within the circle, for then it signifies both.

Circles about the moon always foreshow winds on that side where they break, also a notable shining in some part of the circle signifies winds from that part where the shining is.

If the circles about the moon be double or treble, they show horrible and rough tempests, and especially if these circles be not whole, but spotted and divided.

Full moons, as concerning the colours and circles, do not, yet foreshow the same things as the fourth rising, but present, and not so long delayed.

The globe of flame which the ancients called Castor, is seen by mariners and sea-faring men at sea, if there be one, presages a cruel tempest. Castor is the dead brother, much more if it stick not close to the mast, but dances

But if they be twins (and Pollux, the living brother, be), and that when the tempest is high, it is a good presage if there be three (namely, if Helen, the plague of all come in), it will be a more cruel tempest : so that one to show the undigested matter of the storm ; two, a full and ripe matter ; three or more, an abundance that hardly be dispersed.

Upon the hearth, when they look paler than they are wonted, and make a murmuring noise within themselves, bode age tempests ; and if the flame rises, bending and turning signifies wind chiefly ; and when the snuffs of lamps and candles grow like mushrooms with broad heads, it is a sign of weather.

Reeds and straws playing on the ground, without any force of wind that can be felt, and the down of plants flying, feathers swimming and playing upon the water, signify wind is near at hand.

Sea-fowls flying at one another, and flying together in flocks, especially sea-mews and gulls, flying from the sea and land hastening to the banks and shores, especially if they make noise, and play upon dry land, they are prognostics of weather, especially if they do so in the morning.

Contrarywise, sea-fowls going to the water, and beating their wings, chattering, and bathing themselves, especially swans, are all presages of storms.

Geese and ducks cleanse their feathers with their bills in the wind ; but geese, with their importunate crying, call for weather.

Heron flying high, so that it sometimes flies over a low place signifies wind ; but kites, when they fly high, foreshow weather.

Dogs, as it were, barking after a sobbing manner, if they bark in it, do presage winds ; but if they catchingly swallow their voice again, or croak a long time together, it signifies they shall have some showers.

A chattering owl was thought by the ancients to foretell of weather : if it were fair, rain ; if cloudy, fair weather ; but if it be the owl making a clear and free noise, for the owl signifies fair weather, especially in winter.

Geese perching in trees, if they fly to their nests, and give no noise betimes, it presages tempest ; but the heron, as it were, sad and melancholy upon the sand, or a walking up and down, do presage wind only.

Dolphins playing in a calm sea are thought to prognosticate fair weather from that way they come; and if they play and frolic in the water when the sea is rough, they presage fair weather. Most kinds of fishes swimming on the top of the water, and sometimes leaping, do prognosticate wind.

Upon the approach of wind, swine will be so terribly disturbed, and use such strange actions, that countenance say that creature only can see the wind and perceive the horridness of it.

A little before the wind, spiders work and spin carefully, as if they prudently forestalled the time, knowing that when the weather they cannot work.

Before rain the sound of bells is heard further off, but when the wind it is heard more unequally, drawing near and then further off, as it doth when the wind blows really.

Pliny affirms for a certain that three-leaved grass grows together, and raises its leaves against a storm.

He says likewise, that vessels which food is put in, leave a kind of sweat in cupboards, which presages storms.

There lies hidden a flatuous and expansive spirit in silver, so that it doth (in some men's opinions) imitate gunpowder and a little of it mixed with gunpowder will make the powder stronger. Likewise the chymists speak of the gold, that being prepared some way, it will break out suddenly, like to thunder; but these things I never tried.

As originally published the 'History of the Winds' had appended to it the *Aditus*, or Introduction to the other five enumerated Histories. The second History, or that of Density and Levity, was after Bacon's death published from his papers, first by Gruter (1653) in the *Impetus Philosophici* (pp. 337-379), and then in a more perfect form by Rawley in the *Opuscula Posthuma* (1658). That History, therefore, follows the 'History of the Winds.' We believe the English translation of the 'Historia Densitatis et Levitatis' that inserted by Shaw in the Fourth Part of the arrangement of the *Instauration*, and entitled 'A Plan for the Particular History of Condensation and Rarefaction in Natural Bodies.' The following is a version of the *Aditus*, or Introduction:—

order if nature remain debtor to philosophy and the
 , when she has never been summoned to an account;
 has hitherto been no careful and regular inquiry, no
 tolerable estimate made, as to the sum or quantity of
 n nature; nor any notice taken how it is disposed and
 upon bodies. It is a just axiom that nothing can be
 d from or added to the sum total of the universe; and
 leed have handled the common-place, how bodies may
 ed and contracted, in respect of more and less, without
 g a vacuum between: but for the nature of conden-
 rd rarefaction, one attributes it to a greater and less
 of matter; another eludes the point; whilst the
 ty following their author, think to discuss and settle the
 matter by that trifling distinction of art and power.
 en they who attribute condensation and rarefaction to
 rent quantities of matter, which is the true notion, and
 otally deprive the *materia prima* of quantity; though
 forms they require it to be indifferent, yet here end
 uiry, and look no farther without perceiving the con-
 : thus slightly passing over, or at best not fully pur-
 consideration which regards infinite particulars, and is
 mer the foundation of all natural philosophy.

oceed, therefore, upon what has been justly laid down
 e transmutation of bodies; matter can never be annihili-
 at it requires the same omnipotent power to annihilate
 ate out of nothing; neither of which ever happens in the
 f nature, so that the original quantity of matter remains
 same, without addition or diminution. And that
 inal stock of matter is differently portioned out among
 cannot be doubted; for it were madness, by abstract
 s, to pretend that one hogshead contains as much water
 ogsheads of water; or, that one hogshead of air contains
 as ten hogsheads of air. But though it be admitted
 quantity of matter rises in proportion to measure in
 body, this is still questioned in bodies of different
 out if it be demonstrated that one hogshead of water
 nto air will make ten hogsheads of air (and it may
 : proved to make a hundred), there is an end of the
 for in this case the water and the air are the same body,
 tained in ten hogsheads, though before it was contained
 and therefore to assert that one whole hogshead of
 ay be converted into but one whole hogshead of air, is
 to assert that something may be reduced to nothing;

for in this case one-tenth part of the water is sufficient, and the other nine parts must then be annihilated: so, on the contrary to assert that a hogshead of air is convertible into a hogshead of water, is to assert that something may be created out of nothing, for the hogshead of air will make but the tenth part of a hogshead of water, and therefore the other nine parts must be produced from nothing.

We shall, however, ingenuously confess it a difficult task to settle and ascertain the exact proportions and quantities of matter contained in different bodies, and to show by what industry and sagacity a true information may be had thereof: though the great and extensive usefulness of the inquiry will abundantly reward the pains that shall be bestowed upon it. For to understand the density and the rarity of bodies, and much more how to procure and effect their condensation and rarefaction, is a thing of the utmost importance, both in speculative and practical philosophy; therefore as the inquiry is, perhaps, of all others the most fundamental and universal, we should come to it well prepared, for all natural philosophy is a perfectly loose and untwisted thing without it.

This History, it therefore appears, is in reality mainly an inquiry into what is now called the specific gravity, or, as Bacon terms it, the comparative gravity (*gravitas comparata*), of different substances. Instead of distilled water, which is now commonly employed as the standard of comparison, he adopts pure gold as the standard. But his tables of specific gravities, if they were narrowly examined, would probably be found to exhibit much more serious discordances with the results of modern investigation than this. Bacon himself, however, distinguishes density and rarity throughout from gravity and levity, venturing to affirm only that the latter qualities appear to have a general consent or agreement with the former. And he had also, as we have seen, proposed a separate 'History of Gravity and Levity.' Much of the present investigation, besides, is occupied with the subject of heat and cold.

The 'History of Density and Rarity' shows all Bacon's untiring activity and patience in the collection of facts, and also considerable ingenuity in many of the experiments which are detailed or suggested; though it we

Be difficult to detect in the conduct of the inquiry the regular application either of what he has propounded in the *Novum Organum* as his own novel method, or of any other. But it does not contain many things that are now of much interest in any point of view. The following extracts from Shaw's version will afford a sufficient specimen of the work :—

We know of nothing heavier than pure gold ; nor has any method yet been found of increasing the gravity of pure gold by art.

But lead has been observed to increase both in bulk and weight ; especially by lying in cellars underground, where bodies readily grow mouldy. This has principally been observed in stone statues ; the feet whereof, where fastened together with bands of lead, that have been found swelled so that some parts thereof hung prominent or pendulous, like warts upon the stone. But whether this were really an increase of the lead or only a sprouting of its vitriol, should be farther examined.

Having once, by accident, left a cut citron in a parlour for two months in the summer, I afterwards found a sprouted putrefaction on the part that was cut, appearing to rise in certain hairs, the height of an inch ; and on the top of each hair grew a head like the head of a small iron nail, thus plainly beginning to resemble a plant.

Air is simply dilated by heat ; for in this case there is nothing separated or emitted, as in tangible bodies ; but barely an expansion made.

In the case of cupping-glasses, when the glass and the air it contains are heated, the glass is applied to the skin ; and soon after the air which was dilated by the heat, gradually contracts itself as the heat decreases, upon which the flesh is thrust into the glass by the motion of connexion. If it be desired that the cupping-glass should draw stronger, let a sponge be dipped in cold water and applied to the belly of the glass ; for by this coolness the internal air will be more contracted, and the attraction of the glass increased.

If a glass be heated and inverted into water, it will attract the water, so as to fill a third part of the cavity ; whence it is plain that the air was rarefied by the heat in that proportion. But if instead of a thin glass, which will not bear a great heat without danger of breaking, an iron or copper vessel were

combustible bodies open so as by fire first to emit a fume, take flame, and lastly fall into ashes. . . .

There are certain ways of killing and destroying metals, so when dissolved and opened they shall be no longer of reduction. And something of this kind appears really in quicksilver; which, if forcibly ground along with turpentine, spittle, &c., the quicksilver is killed, and acquires an aversion to recover its pristine form.

Wool gains weight by lying long upon the earth, could not happen if some pneumatical matter were not used into such as is tangible and ponderous.

As an ancient practice at sea to spread and hang out of wool by night on the sides of ships, but so as not to be wet by the water; and by this means to collect and express a sweet dew out of them in the morning, for the service of the voyage. We have found upon trial that four ounces of wool being tied to a rope and let down into a well, fifty-six yards out so as to come only within twelve yards of the water, wool has, in a night's time, acquired the additional weight of one ounce and a drachm; and perfect drops of water have been made to stick on the outside of the wool, so that one might in the same manner have washed one's hands therewith. And this I have several times tried, with different increases of weight, but with somewhat considerable.

In China they have artificial mines of porcelain earth, by digging at some depth underground a certain mass of pre-plaster or cement, which lying thus buried for about several years, is converted into porcelain. So that these mines are transmitted, like an estate, from father to son.

We have been well assured that an egg, by long lying at the bottom of a moat, was found manifestly petrified, with the marks and distinctions of the shell, white and yolk, still remaining; only the shell was here and there broke, and shone.

And I have frequently heard that the white of an egg when turned to a stony matter; but neither know the truth of the thing nor the manner of doing it.

Reeds are found in the West Indies, even in sandy deserts in many places, large canes containing in every joint a considerable quantity of sweet water, to the great refreshment of the traveller.

There is said to be a certain tree in one of the Canary Islands continually distils water, and has a certain dewy cloud hanging over it. It were highly worth examining.

of an aerial and flamy pneumatical substance, as their juices are of one that is aqueous and oily.

All tangible bodies here with us have a pneumatical substance, or spirit, joined to and included in them.

No spirits, such as those of vegetables and animals, are found loose and unconfined amongst us, but shut up and imprisoned in tangible bodies.

Condensation and rarefaction are the proper effects of cold and heat.

Heat operates upon pneumatical bodies by simple expansion.

Heat has two operations upon tangible bodies, and always dilates the pneumatical parts, but sometimes contracts and sometimes relaxes the gross ones.

It observes this rule: when the spirit of the body is discharged, it contracts and indurates, but softens and dissolves when the spirit is detained.

Colliquation begins with expanding the pneumatical parts of the subject; but other dissolutions begin with expanding the gross parts, and setting free the operations of those that are pneumatical.

Next to heat and cold, the most powerful rarifier and condenser of bodies is consent and flight.

Restoration from violence both dilates and condenses, in a contrary tendency to the violence.

Assimilation both dilates and condenses, as the assimilating body is rarer or denser than the body assimilated.

The rarer the body, the greater expansion and contraction it is capable of from external violence, to a certain degree.

If tension or pressure exceeds its bounds in a rare body, such a body frees itself more powerfully than a dense one, as being more active.

The most powerful expansion is that of air and flame conjointly.

Dilation and contraction are but imperfect, where the bodies easily and readily restore themselves.

Density and rarity have a great affinity with gravity and levity.

Man has but little power in the business of condensation, for want of a potent degree of cold.

Age is like a lambent fire, and acts like heat, though in a more exquisite manner.

Age brings bodies either to a state of putrefaction or dryness.

Of the next three enumerated Histories we have only

the *Aditus*, or Introductions, as published at the end of the 'Historia Ventorum' (1622). We give them as translated by R. G.

The History of Heavy and Light.—The motion of gravity and lightness the ancients did illustrate with the name of natural motion, for they saw no external efficient nor any apparent resistance, yet the motion seemed swifter in its progress. This contemplation, or rather speech, they seasoned with that mathematical fantasy of the staying or stopping of heavy things at the centre of the earth (although the earth should be bored quite through), and the scholastic invention of the motion of bodies to their several places. Having laid or set down these things, supposing they had done their parts, they looked no further, but only that which some of them more carefully inquired after, namely, of the centre of gravity in divers figures, and of such things as are carried by water. Neither did any of the modern authors do anything worth speaking of concerning this, only by adding some few mechanical things which they had also wrested with their demonstrations. But, laying many words aside, it is more certain that a body cannot suffer but by a body, neither can there be any local motion made, unless it be solicited or urged forward, either by the parts of the body itself which is moved, or by the adjacent bodies, which either touch it or are near unto it, or are at least within the orb of its activity. So that Gilbertus did not unknowingly introduce magnetic powers, he also becoming a loadstone, namely, drawing more things by those powers than he should have done, and building a ship, as it were, of a round piece of wood.

The History of the Sympathy and Antipathy of things.—Strife and amity in nature are the egggers on of motions, and the keys of works. Hence proceed the union and dissension of bodies, hence the mixtion and separation of bodies, hence the high and intimate impressions of virtues, and the which they call joining of actives with passives; finally they are the great and wonderful works of nature. But the part of philosophy, namely, of the sympathy and antipathy of things, is most impure, which also they call natural magic, and (which always likely comes to pass) where diligence and care hath wanted, there hath hope remained; but the operation thereof in men is merely like unto certain soporiferous medicines which cast one asleep, and do more enervate and infuse into him merry and pleasant dreams.

casts man's understanding into a sleep, representing in specific properties and hidden virtues, whereby take no more, nor look after the finding and searching true causes, but acquiesce and lie still in these idle when it insinuates an innumerable company of fictions to dreams, and vain men hope to know the nature by outward shape and show, and by extrinsical similitude over inward properties. Their practice also is very like their inquiry, for the precepts of natural magic are such, men should be confident that they could subdue the earth, get their bread without the sweat of their brow, and to conquer over things by idle and easy applications of bodies; and they have in their mouths, and, like undertakers or morticians, they call upon the loadstone and the consent which is gold and quicksilver; and some few things of this kind they allege for to prove other things which are not bound by such like contract. But God hath appointed the best of all to be inquired out, and be wrought by labours and pains. We will be a little more careful in searching the law of nature and the mutual contracts of things, favouring miracles, nor making too lowly and straight-inquisition.

History of Sulphur, Mercury, and Salt.—This triple principle hath been introduced by the chymists, and, concerning speculations, is of them which they bring the mention. The most subtile and acute of these, and who are most philosophical, will have the elements earth, water, air, and the sky. And these they will have to be the matter of things, but the matrixes in the specific seeds of things do engender in the nature matrix. But for the *materia prima*, or primary matter, scholars do lay down, as it were, naked and indifferently they substitute those three, sulphur, mercury, and salt, which all bodies are gathered together and mixed. We suspect of their words, but their opinions are not very different. Yet that doth not ill agree with their opinion, namely, to hold two of them, to wit, sulphur and mercury (taken according to our sense), to be very first and prime natures, and outward figurations of matter, and almost chief among the first of the first classis. But we may vary the words of sulphur and mercury, and name them otherwise oily, waterish, inflammable, not inflammable, or the like; for them to be two very great things of the three, and which and penetrate the universe, for amongst subterranean

things they are sulphur and mercury, as they are called; the vegetable and animal kind they are oil and water; in inferior spiritual things they are air and flame; in the heavens the body of a star and the pure sky, but of this last duality yet say nothing, though it seem to be a probable deciphering. If they mean by salt the fixed part of the body, which is resolved either into flame or smoke, this belongeth to the inquisition of fluid and determinate things; but if we take it according to the letter, without any parabolical meaning, it is no hard thing from sulphur and mercury, but mixed both, connexed into one by an acrimonious and sharp spirit. For all manner of salt hath inflammable parts, and other parts also which not only will not take fire, but do also abhor it and fly from it. Yet the inquisition of salt being somewhat allied to the inquisition of the other two, and exceeding useful, being a tie and band of both natures, sulphurous and salt, and the very rudiment of life itself, we have thought fitting to comprehend it also within this history and inquisition. But in the mean time, we give you notice that those spiritual things, air, water, stars, and sky, we do (as they very well deserve it) reserve them for proper and peculiar inquisition, and here in this place to set down the history only of taught, that is to say, mineral or vegetable sulphur and mercury.

The last of the six enumerated Histories, that of *Life and Death*, was completed by Bacon, and published by him, in 8vo., in 1623, with the title of '*Historia Vitæ et Mortis, quæ est Instaurationis Magnæ Pars Tertia.*' In this original edition the work fills 454 pages. An anonymous translation of it was published, in a duodecimo volume, in 1638, under the title of '*The Historie of Life and Death, with Observations Naturale and Experimentale for the prolonging of Life; written by the Right Honorable Francis Lo: Verulam, Viscount of Alban* — Printed for Humphrey Mosley at the Prince of Armes in Paul's Church Yard.' It is dedicated by the bookseller to the Rt. Worshipful Sir Edward Mosley, Knight, his Majesty's Attorney General of the Duchy of Lancaster, with whom, however, the dedicator claims no relationship, their names, he says, agreeing "only in denomination." The *Aditus* (called by this anonymous translator the *Access*) is also translated under the title of '*The Entrance*' by R. G. at the end of the '*Hi-*

of the Winds' (1653). And along with the seventh edition of the *Sylva Sylvarum*, folio, 1658, appeared a new translation of the entire work, under the title 'History, Natural and Experimental, of Life and Death, or, of the Prolongation of Life.' It was introduced by the following address 'To the Reader' from Dr. Rawley, the editor of the *Sylva*:—

I am to give advertisement that there came forth, of late, a translation of this book by an unknown person, who, though I wished well to the propagating of his lordship's works, yet I was altogether unacquainted with his lordship's style and manner of expressions, and so published a translation lame and defective in the whole. Whereupon, I thought fit to recommend the same to be translated anew by a more diligent and zealous pen, which hath since travailed in it; and though it still comes short of that lively and incomparable spirit and expression which lived and died with the author, yet I dare avouch it to be much more warrantable and agreeable than the former. It is true this book was not intended to have been published in English, but seeing it hath been already made free of that language, whatsoever benefit or delight may redound from it, I commend the same to the courteous and judicious reader.

W. R.

This translation, therefore, may be considered as having been at least sanctioned, if not actually revised, by Rawley. It is, however, very incorrectly printed. There is also a translation by Shaw, by whom this History of Life and Death is made to commence the Fourth Part of the *Instauration*.

The work is preceded by a Dedication, thus given in the translation published by Rawley:—

To the present Age and Posterity, Greeting.

Although I had ranked the History of Life and Death as the last amongst my six monthly designations, yet I have thought fit, in respect of the prime use thereof (in which the least loss of time ought to be esteemed precious), to invert that order and send it forth in the second place. For I have hope and wish that it may conduce to a common good; and that the noblest sort of physicians will advance their thoughts, and not employ their time wholly in the sordidness of cures, neither honoured for necessity only, but that they will become coadjutors

and instruments of the Divine omnipotence and clemency, prolonging and renewing the life of man: especially, seeing prescribe it to be done by safe and convenient and civil way though hitherto unassayed. For though we Christians continually aspire and pant after the land of promise, yet will be a token of God's favour towards us, in our journeying through this world's wilderness, to have our shoes and garments (I mean those of our frail bodies) little worn or impaired.

FR. ST. ARSANO.

The *Aditus*, called 'The Preface' in this translation is as follows:—

It is an ancient saying and complaint, that life is short and art long. Wherefore, it becometh us, who make it our chief aim to perfect arts, to take upon us the consideration of prolonging man's life: God, the author of all truth and life, prospering our endeavours. For though the life of man be nothing else but a mass and accumulation of sins and sorrows, as they that look for an eternal life set but light by a temporal, yet the continuation of works of charity ought not to be contemptred even by us Christians. Beatus, the beloved disciple of our Lord survived the other disciples: and many of the fathers of the church, especially of the holy monks and hermits were long lived which shows, that this blessing of long life so often promised in the old law, had less abatement after our Saviour's days than other earthly blessings had. But to esteem of this as the chiefest good, we are but too prone. Only the inquiry is difficult how to attain the same; and so much rather, because it is corrupted with false opinions and vain reports. For both those things which the vulgar physicians tell of, radical moisture and natural heat, are but mere fictions; as the immoderate praises of chemical medicines first puff with vain hopes, and then fail their admirers.

And as for that death which is caused by suffocation, putrefaction, and several diseases, we speak not now, for that pertains to an history of physic; but only of that death which cometh by a total decay of the body, and the inconcoction of old age. Nevertheless, the last act of death and the very extinguishing of life itself, which may so many ways be wrought outwardly and inwardly (which, notwithstanding, have, as it were, a common porch before it comes to the point of death), will be pertinent to be inquired of in this treatise, but we reserve it for the last place.

That which may be repaired by degrees, without a

of the first stock, is potentially eternal: as the vestal
 Therefore, when physicians and philosophers saw that
 creatures were nourished, and their bodies repaired, but
 this did last only for a time, and afterwards came old
 and, in the end, dissolution; they sought death in some-
 which could not properly be repaired, supposing a radical
 ture incapable of solid reparation, and which, from the
 infancy, received a spurious addition, but no true repara-
 whereby it grew daily worse and worse, and in the end
 ght the bad to none at all. This conceit of theirs was both
 ant and vain; for all things, in living creatures, are, in
 youth, repaired entirely; nay, they are, for a time, in-
 ed in quantity, bettered in quality, so as the matter of
 ation might be eternal, if the manner of reparation did not

But this is the truth of it: there is, in the declining of
 an unequal reparation; some parts are repaired easily,
 s with difficulty and to their loss; so, as from that time
 odies of men begin to endure the torments of Mezentius—
 the living die in the embraces of the dead. And the parts
 r reparable, through their conjunction with the parts
 ly reparable, do decay. For the spirits, blood, flesh, and
 re, even after the decline of years, easily repaired; but
 rlier and more porous parts (as the membranes, all the
 les, the sinews, arteries, veins, bones, cartilages, most of
 owels, in a word, almost all the organical parts), are
 ly reparable, and to their loss. Now these hardly re-
 le parts, when they come to their office of repairing the
 which are easily reparable, finding themselves deprived
 eir wonted ability and strength, cease to perform any
 r their proper functions; by which means it comes to
 that in process of time the whole tends to dissolution;
 even those very parts, which in their own nature are with
 ease reparable, yet through the decay of the organs of
 ation can no more receive reparation, but decline, and
 e end utterly fail. And the cause of the termination of
 s this: for that the spirits, like a gentle flame, continually
 ng upon bodies, conspiring with the outward air, which is
 sucking and drying of them, do in time destroy the whole
 c of the body, as also the particular engines and organs
 of, and make them unable for the work of reparation.
 e are the true ways of natural death well and faithfully
 revolved in our minds: for he that knows not the ways
 ture, how can he succour her or turn her about?

Therefore, the inquisition ought to be twofold: the one touching the consumption or depredation of the body of man; the other, touching the reparation and renovation of the same; to the end that the former may, as much as possible, be forbidden and restrained, and the latter comforted. The former of these pertains especially to the spirits and outward air, by which the depredation and waste is committed; the latter to the whole race of alimentation, or nourishment, whereby the renovation or restitution is made. And as for the former part touching consumption this hath many things common with bodies inanimate or without life. For such things as the native spirit (which is in all tangible bodies, whether living or without life), and the ambient or external air, worketh upon bodies inanimate, the same it attempteth upon animate or living bodies, although the vital spirit superadded doth partly break and bridle those operations, partly exalt and advance them wonderfully. For it is most manifest that inanimate bodies (most of them) will endure a long time without any reparation; but bodies animate, without food and reparation, suddenly fall and are extinguished, as the fire is. So, then, our inquisition shall be double: first, we will consider the body of man as inanimate, and not repaired by nourishment; secondly, as an animate, and repaired by nourishment. Thus having prefaced these things, we come now to the topic place of inquisition.

This 'History of Life and Death' is by far the most curious of these Natural Histories compiled by Bacon. Our space, however, will not allow us to extend the following extracts, which we continue to take from the translation published by Rawley.

Let this be laid for a foundation, which is most sure, that there is, in every tangible body, a spirit or body pneumatical, enclosed and covered with the tangible parts, and that from this spirit is the beginning of all dissolution and consumption, so as the antidote against them is the detaining of this spirit.

Johannes de Temporibus, among all the men of our latter ages, out of a common fame and vulgar opinion, was reputed long-lived, even to a miracle, or rather, even to a fable; his age hath been counted above three hundred years; he was by nation a Frenchman, and followed the wars under Charles

Great. Gartius Aretine, great-grandfather to Petrarch, arrived at the age of an hundred and four years ; he had ever enjoyed the benefit of good health : besides, at the last he felt rather a decay of his strength than any sickness or malady, which is the true resolution by old age. Amongst the Venetians there have been found not a few long-livers, and those of the more eminent sort : Franciscus Donatus, Duke ; Thomas Contarenus, Procurator of Saint Mark ; Franciscus Molinus, Procurator also of Saint Mark ; and others. But most memorable is that of Cornarus, the Venetian, who, being in his youth of a sickly body, began first to eat and drink by measure to a certain weight, thereby to recover his health ; this cure turned, by use, into a diet, that diet to an extraordinary long life, even of a hundred years and better, without any decay in his senses, and with a constant enjoying of his health. In our age, William Postel, a Frenchman, lived to an hundred and well nigh twenty years ; the top of his beard on the upper lip being black, and not grey at all, a man crazed in his brain, and of a fancy not altogether sound, a great traveller, mathematician, and somewhat stained with heresy.

I suppose there is scarce a village with us in England, if it be any whit populous, but it affords some man or woman of fourscore years of age. Nay, a few years since, there was, in the county of Hereford, a May-game or morris-dance, consisting of eight men, whose ages computed together made up eight hundred years ; insomuch that what some of them wanted of an hundred others exceeded as much.

In the Hospital of Bethleem, corruptly called Bedlam, in the suburbs of London, there are found, from time to time, many mad persons that live to a great age.

Not only the goodness or pureness of the air, but also the equality of the air is material to long life. Intermixture of hills and dales is pleasant to the sight, but suspected for long life. A plain moderately dry, but yet not over-barren or sandy, nor altogether without trees and shade, is very convenient for length of life.

Inequality of air (as was even now said) in the place of our dwelling is naught ; but change of air by travelling, after one be used unto it, is good ; and therefore great travellers have been long-lived. Also those that have lived perpetually in a little cottage, in the same place, have been long-livers ; for air accustomed, consumeth less ; but air changed, nourisheth and repaireth more.

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Fair in face, or skin, or hair, are shorter lives; black, red, or freckled, longer. Also, too fresh a colour in youth do less promise long life than paleness. A hard skin is a sign of long life rather than a soft; but we understand not this of rugged skin, such as they call the goose-skin, which is as were spongy, but of that which is hard and close. A forehead with deep furrows and wrinkles is a better sign than a smooth and plain forehead.

The hairs of the head hard, and like bristles, do betoken longer life than those that are soft and delicate. Curled hairs betoken the same thing if they be hard withal, but the contrary if they be soft and shining. The like, if the curling be rather thick than in large bunches.

Early or late baldness is an indifferent thing: seeing many which have been bald betimes have lived long. Also early grey hairs (howsoever they may seem forerunners of old age approaching) are no sure signs; for many that have grown grey betimes have lived to great years. Nay, hasty grey hairs without baldness, is a token of long life; contrarily, if they be accompanied with baldness.

Tallness of stature (if it be not immoderate) with convenient making, and not too slender, especially if the body be active withal, is a sign of long life. Also, on the contrary, men of low stature live long, if they be not too active and stirring.

In the proportion of the body, they which are short to the waist, with long legs, are longer lived than they which are long to the waist and have short legs; also, they which are large in the nether parts, and straight in the upper (the making of the body rising, as it were, into a sharp figure), are longer lived than they that have broad shoulders and are slender downwards.

Leanness, where the affections are settled, calm, and peaceable, also a more fat habit of body, joined with choler and a disposition stirring and peremptory, signify long life; but corpulency in youth foreshows short life; in age it is a thing more indifferent.

To be long and slow in growing is a sign of long life; to a greater stature, the greater sign: if to a lesser stature, yet a sign, though. Contrarily, to grow quickly to a great stature is an evil sign; if to a small stature, the less evil.

Firm flesh, a raw-boned body, and veins lying higher than the flesh, betoken long life; the contrary to these, short life.

A head somewhat lesser than to the proportion of

only; a moderate neck, not long, nor slender, nor fat, nor too short; wide nostrils, whatsoever the form of the nose be; a large mouth; an ear grisly, not fleshy; teeth strong and contiguous, small or thin set, foretold long-life; and much more, if some new teeth put forth in our elder years.

Certainly this is, without all question, that diet well ordered bears the greatest part in the prolongation of life: neither did I ever meet an extreme long-lived man, but being asked of his course he observed something peculiar, some one thing, some another. I remember an old man above an hundred years of age, who was produced as a witness touching an ancient prescription; when he had finished his testimony, the judge familiarly asked him how he came to live so long: he answered, beside expectation, and not without the laughter of the hearers, "By eating before I was hungry, and drinking before I was dry."

I make some question touching the frequent letting of blood, whether it conduceth to long life or no; and I am rather in the opinion that it doth, if it be turned into a habit, and other things be well disposed; for it letteth out the old juice of the body, and bringeth in new.

I suppose, also, that some emaciating diseases well cured do profit to long life: for they yield new juice, the old being consumed; and (as he saith) to recover a sickness is to renew youth. Therefore, it were good to make some artificial diseases, which is done by strict and emaciating diets.

The spirits are the master-workmen of all effects in the body. This is manifest by consent and by infinite instances.

If any man could procure that a young man's spirit could be conveyed into an old man's body, it is not unlikely but this great wheel of the spirits might turn about the lesser wheel of the parts, and so the course of nature become retrograde.

In every consumption, whether it be by fire or by age, the more the spirit of the body or the heat preyeth upon the moisture the lesser is the duration of that thing. This occurs everywhere, and is manifest.

The spirits are to be put into such a temperament and degree of activity, that they should not (as he saith) drink or guzzle the juices of the body, but sip them only.

The Turks find opium, even in a reasonable good quantity, harmless and comfortable; insomuch that they take it before their battle to excite courage. But to us, unless it be in a very small quantity, and with good correctives, it is mortal.

The Turke use a kind of herb which they call Caphe. When they dry and powder, and then drink it in warm water. They say, doth not a little sharpen them both in the age and in their wits; notwithstanding, if it be taken in a great quantity it affects and disturbs the mind, whereby it is manifest that it is of the same nature with opiates.

There is a root much renowned in all the eastern parts, which they call Betel, which the Indians and others use to carry in their mouths, and to champ it, and by that champing they are wonderfully enabled both to endure labours and to overcome sicknesses, and to the act of carnal copulation; it seems to be a kind of stupefactive, because it exceedingly blacks the teeth.

Tobacco, in our age, is immoderately grown into use, and affects men with a secret kind of delight, insomuch that they who have once inured themselves unto it can hardly afterwards leave it; and, no doubt, it hath power to lighten the body, and to shake off weariness. Now the virtue of it is commonly thought to be because it opens the passages and voids of the body, but it may more rightly be referred to the condensation of the spirits, for it is a kind of henbane, and manifestly troubles the head as opiates do.

It is affirmed that gunpowder, which consisteth principally of nitre, being taken in drink doth conduce to valour, that it is used oftentimes by mariners and soldiers before they begin their battles, as the Turke do opium.

As the condensation of the spirits by suborning opium is, in some sort, performed by odours, so also it is by subordinates to nitre; therefore the smell of new earth, taken either by following the plough, or by digging by weeding, excellently refresheth the spirits. Also the turn, yield a good refreshing to the spirits. Also the strawberry-leaves dying Likewise the smell of violets, flowers, or bean-flowers, or sweet-briar, or honey-suckle, as they grow, in passing by them only, is of the same nature.

Nay, and we know a certain great lord who it is said that had every morning, immediately after sleep, a chamber-pot full of earth, hid in a fair napkin, under his nose, that he might smell thereof.

These procure quiet sleep: violets, lettuce, especially a syrup of dried roses, saffron, balm, apples, at bedtime, a sup of bread in malmsy, especially when it has been first infused; therefore, it would not be

ill or a small draught of those things, and to use it frequently. Quinces and wardenes roasted do induce sound sleep, but above all things, in youth, and for those that have not strong stomachs, it will be best to take a good draught of clear cold water when they go to bed.

Hope is the most beneficial of all the affections, and doth conduce to the prolongation of life, if it be not too often frustrated, but entertaineth the fancy with an expectation of good. Men, therefore, they which fix and propound to themselves some end and mark and scope of their life, and continually and by degrees go forward in the same, are, for the most part, long-lived; inasmuch, that when they are come to the top of their hope, they do not go no higher therein, they commonly droop, and live long after; so that hope is a leaf-ivy, which may be cut out to a great extension, like gold.

Philosophy and light contemplation are very powerful to the prolonging of life, for they hold the spirits in such things as are pure and calm, and suffer them not to tumultuate or to carry themselves unquietly and waywardly. And, therefore, all the philosophers of natural things, which had so many and so great objects to admire (as Democritus, Plato, Parmenides, Epicurus) were long-lived; also rhetoricians, which tasted highly of things, and studied rather exornation of speech than profundity of matters, were also long-lived: as Gorgias, Demosthenes, Isocrates, Seneca; and certainly, as old men are, for the most part, talkative, so talkative men do often grow old, for it shows a light contemplation, and such as doth not much strain the spirits or vex them; but subtile and acute inquiry and inquisition shortens life, for it tireth the spirit and exhausts it.

Seneca saith not unwisely, that old men, for the comfort of their spirits, ought often to remember and ruminate upon the pleasures of their childhood and youth. Certainly, such a remembrance is a kind of peculiar recreation to every old man; therefore it is a delight to men to enjoy the society of those which have been brought up together with them, and to the places of their education. Vespasian did attribute much to this matter, that when he was emperor he would, by all means, be persuaded to leave his father's house, though he was old, lest he should lose the wonted object of his eyes, and the memory of his childhood; and besides, he would drink in the golden cup tipped with silver, which was his grandmother's, on festival days.

and the comforting of the flesh : seeing that it is both notably astringent, and hath, besides, an oleosity and subtile heat, without any acrimony. I remember a certain Englishman who, when he went to sea, carried a bag of saffron next his stomach, that he might conceal it and so escape custom : and whereas he was wont to be always exceeding sea-sick, at that time he continued very well, and felt no provocation to vomit.

Hippocrates adviseth in winter to wear clean linen, and in summer foul linen and besmeared with oil ; the reason may seem to be, because in summer the spirits exhale most, therefore the pores of the skin would be filled up.

Hereupon we are of opinion that the use of oil, either of olives or sweet almonds, to anoint the skin therewith, would principally conduce to long life : the anointing would be done every morning, when we rise out of bed, with oil in which a little bay-salt and saffron is mixed. But this anointing must be lightly done with wool or some soft sponge, not laying it on thick, but gently touching and wetting the skin.

The wild Irish, as soon as they fall sick, the first thing they do is to take the sheets off their beds, and to wrap themselves in the woollen clothes.

Some report that they have found great benefit in the conservation of their health by wearing scarlet waistcoats next their skin and under their shirts, as well down to their nether parts as on the upper.

As for the bread, oaten bread, or bread with some mixture of peas in it, or rye-bread, or barley-bread, are more solid than wheat-bread ; and in wheat-bread the coarse cheat-bread is more solid than the pure manchet.

The inhabitants of the Orcades, which live upon salted fish, and generally all fish-eaters, are long-lived.

The monks and hermits, which fed sparingly and upon dry aliment, attained commonly to a great age.

Also pure water, usually drunk, makes the juices of the body less frothy ; unto which, if for the dulness of the spirits (which, no doubt, in water is but a little penetrative) you shall add a little nitre, we conceive it would be very good.

I wonder much how that same calidum bibere, to drink warm drink (which was in use among the ancients), is laid down again. I knew a physician that was very famous, who, in the beginning of dinner and supper, would usually eat a few spoonfuls of very warm broth with much greediness.

I do verily conceive it good that the first draught, either

glosse and borrag, citrons, sweet lemons, and permaines of a colder sort. Also that way which we said, both gold and silvers work a good effect, not only within the veins, but in their passage and about the parts near the heart; namely, by cooling, without any malignant quality.

Of the affections we have spoken before, we only add this: that every noble and resolute, and (as they call it) heroicall desire, strengtheneth and enlargeth the powers of the art.

As for the brain, where the seat and court of the animal spirits is kept, those things which were inquired before, touching opium and nitre, and the subordinates to them both, also touching the procuring of placid sleep, may likewise be referred hither. This also is most certain, that the brain is in the same sort in the custody of the stomach; and therefore those things which comfort and strengthen the stomach, do help the brain by consent, and may no less be transferred hither. We will add a few observations; three outward, one inward.

We would have bathing of the feet to be often used; at least once in the week; and the bath to be made of lye, with bay-salt, and a little sage, camomile, fennel, sweet-marijuana, and pepper-wort, with the leaves of angelica, green.

We commend also a fume, or suffumigation, every morning, of dried rosemary, bay-leaves dried, and lignum vitae; for all sweet gums oppress the head.

Especially care must be taken that no hot things be applied to the head outwardly; such are all kind of spices, the very nutmeg not excepted: for those hot things we debase them on the soles of the feet, and would have them applied there only; but a light anointing of the head with oil, mixed with roses, myrtle, and a little salt, and saffron, we much commend. Whereas we advised before that the first draught at supper should be taken warm, now we add, that for the preparation of the stomach, a good draught of that liquor (to which every man is most accustomed) be taken warm half an hour before meat also, but a little spiced to please the taste.

That which is most consubstantial to the body of man is warm blood, either of man or of some other living creature; but the device of Ficinus, touching the sucking of blood out of the arm of a wholesome young man, for the restoration of strength in old men, is very frivolous; for that which nourisheth from within ought no way to be equal or homogeneal to the body nourished, but in some sort inferior and subor-

nd credible tradition of an ox lowing after his bowels
cked out. But there is a more certain tradition of a
o being under the executioner's hand for high treason,
heart was plucked out and in the executioner's hand,
rd to utter three or four words of prayer; which
we said to be more credible than that of the ox in
because the friends of the party suffering do usually
ward to the executioner to dispatch his office with the
ed, that they may the sooner be rid of their pain; but
ces we see no cause why the priest should be so speedy
fice.

have been many examples of men in show dead,
id out upon the cold floor, or carried forth to burial;
some buried in the earth which, notwithstanding, have
ain, which hath been found in those that were buried
th being afterwards opened), by the bruising and
ig of their head through the struggling of the body
ie coffin, whereof the most recent and memorable ex-
as that of Joannes Scotus, called the subtile, and a
an, who, being digged up again by his servant, un-
ely absent at his burial (and who knew his master's
in such fits), was found in that state; and the like
d in our days in the person of a player, buried at Cam-

I remember to have heard of a certain gentleman
ld needs make trial in curiosity what men did feel
re hanged; so he fastened the cord about his neck,
himself upon a stool, and then letting himself fall,
; it should be in his power to recover the stool at his
; which he failed in, but was helped by a friend then

He was asked afterwards what he felt. He said, he
ain, but first he thought he saw before his eyes a great
l burning; then he thought he saw all black, and
stly, it turned to a pale blue, or sea-water green, which
s also often seen by them which fall into swoonings.
heard also of a physician yet living, who recovered a
life which had hanged himself, and had hanged half
. by frications and hot baths; and the same physician
less that he made no doubt to recover any man that
ged so long, so his neck were not broken with the first

member, when I was a young man at Poitiers, in
I conversed familiarly with a certain Frenchman, a
young man, but something talkative, who afterwards
be a very eminent man. He was wout to inve

against the manners of old men
minds could be seen, as their bodies
less deformed, besides, being
would maintain that the vices of
correspondence, and were parallel
bodies. For the dryness of the
impudency; for the hardness of
for the lippitude of their eyes,
the casting down of their eyes
wards the earth, atheism (for, as
to heaven as they were wont), for
bers, irresolution of their decrees,
the bending of their fingers, as in
covetousness; for the backling
for their wrinkles, craftiness and
which I have forgotten. But, to
molest and shamefaced, an old
a young man is full of bounty and
is brawny, a young man is afflu-
ent, an old man with a mind
inclined to religion and devotion,
inexperience of evil, an old man
coldness of his charity and long
wise through the difficulty of his
are vehement, an old man's mind
and moveable, an old man more
man is given to liberality, and be-
old man to covetousness, wisdom
his own ends; a young man is
old man is diligent, and given to
man is gentle and obsequious, a
daring, a young man is sincere
man cautelous and close; a y-
great things, an old man to regret
man thinks well of the present
times past before them; a y-
riors, an old man is more forward
other things which pertain to
present inquisition. Notwith-
things they improve in their bodies
they be altogether out of date,
apt for invention, so they excel
things and social things before
generosity and ostentation, for

they are less able for action; so as it was not absurd that poets feigned old Tithon to be turned into a grasshopper.

The treatise concludes with Thirty-two Moveable ones (*Canones Mobiles*) respecting the Duration of and the Form (or Nature) of Death, each accompanied by a long explanation. The English translation issued by Rawley in 1658 was reprinted with every succeeding edition of the *Sylva*; and the two works associated seem to have continued to be a favourite manual with our ancestors down to nearly the close of seventeenth century.

After the *History of Life and Death* the modern editors of the *Instauration* have placed certain other short and the most part unfinished physical investigations, which will be sufficient merely to enumerate. The *History of Sound and of Hearing* ('*Historia et Inquisitio Prima Sono et Auditū, et de Forma Soni et Auditus*') was published by Rawley in the '*Opuscula Varia Postea*' (1658). Bacon's notions about Sound are given fully in the *Sylva Sylvarum*. The *Articles respecting Metals* ('*Articuli de Metallis*') were also first published in Latin in the same volume; but it appears that in this form the piece was a translation by Rawley from Bacon's English. Rawley himself afterwards gave the final English to Lee, the publisher of the *Sylva Sylvarum*, and it was published along with that work, with the title of '*Articles of Inquiry touching Metals*,' in folio, 662. Tenison does not appear to have been aware of this when he reprinted it in the *Baconiana* (1679), under the title of '*Articles of Questions touching Minerals*,' written originally in English by the Lord Bacon, hitherto not published in that language.' In his introduction Tenison says:—"These Questions were translated into Latin, and in that tongue published by Rawley amongst his Lordship's *Opuscula*; but the English originals are now the first time set forth. And, being by me three copies, I publish them by that one which his Lordship had endorsed with his own hand, and is the clean copy." He adds:—"Now, these

to which these fragments relate, however, have all been treated of by Bacon at greater length in other parts of his writings.

The next portion of the Third Part of the *Instauration*, has been arranged, consists of a number of pieces published by Gruter in the 'Scripta in Naturali et Universalis Philosophia' (1653). The first of these, which Gruter prints on the back of his title-page, is elegantly headed 'Temporis Partus Masculus, sive Instaurationis Magna Imperii Humani in Universum;' that is, 'The Male Offspring of Time, or Great Restoration of the Empire of Man over the Universe.' It has been suggested that the reading should probably be 'Tempus Partus Maximus' (The Greatest Birth of Time), which, in a Letter to Father Fulgentio written in 1623-1624, Bacon says was the magnificent title he had in his youthful confidence given to a work he had composed on his method of philosophy forty years before.

At all events, the fragment to which Gruter prefixes this title is nothing more than a Latin translation of the first address to the Deity which Tenison has published in the original English in the *Baconiana*, under the title, according to it, he says, by Bacon himself, of 'The Student's Primer,' and which is introduced, nearly in the same words given by Gruter, in one of the paragraphs of the preface published along with the *Novum Organum* in 1620.* Then we have several pieces from the latter portion of Gruter's volume in the following order:—'Franciscus Bacon Lectori,' a few general remarks by Bacon on the spirit of his philosophy; 'Filum Labyrinthi, sive Inquisitio Legitima de Motu' (The Thread of the Labyrinth, or a Legitimate Inquisition respecting Motion); 'Cogitationes de Natura Rerum' (Speculations on the Nature of Things), being Ten in all, namely, the Section of Bodies, On the Equality and Inequality of Atoms, On the negligence of the Ancients in their Inquiries respecting Motion, On the inutility of the vulgar division of Motion, On the certainty (or con-

* See it in the present work, vol. i. p. 167.

imperfectly explained, and that too in the least considered part. They pretend that gunpowder, when converted arefied into flame, dilates itself, and possesses a larger space, from whence follows the explosion or bursting of the acting body ; but otherwise two bodies should be in one, or a penetration of dimensions ensue, or the form of the body be destroyed, or the situation of the parts of the resisting body become preternatural. There is something in this, the appetite and passion of matter here mentioned have a share in producing the effect ; but the error lies in too easily bringing the whole to a necessity of the body's dilating, without distinctly considering what precedes it in nature. For though it be necessary that the body of the powder, after it is converted into flame, should possess a greater space, yet it is not of the same necessity that the body of the powder should burst into flame, and that with such rapidity ; but this depends upon a preceding conflict, and a train of motions. For doubtless a solid and ponderous body or bullet discharged makes a great resistance before it yields ; and if this resistance be great, the flame needs prevail, so as that the flame shall not drive out the bullet, but the bullet stifle the flame. Therefore, if instead of gunpowder we were to use sulphur, camphor, or the like, which also suddenly catch flame, and because compactness hinders inflammability, if these materials were formed into corns of powder, with a proper proportion of the most combustible wood-coal, yet if nitre were not employed in the composition there would follow no such rapid and powerful motion as in gunpowder ; but the motion of inflammation would be checked and kept down by the resistance of the solid, and so the event be frustrated or no explosion be made. The case seems to be this. The motion here inquired after is simple and compounded, for besides the motion of inflammation, which principally resides in the sulphur of the powder, there is another more strong and violent. This chiefly proceeds from the crude and aqueous spirit of the nitre, and some-again from the willow coal. For this spirit is not only excited, as vapours are by heat, but, what is here the principal thing, flies away and bursts forth with the utmost violence from the heat and inflammation, for which it thus prepares the way. We see some resemblance of this motion in the crackling of dry bay or ivy leaves when thrown into the fire ; and still more evidently in salt, which approaches nearer to the nature of the thing under consideration : we also see somewhat like it when the tallow of a burning candle

the undertaker's heart and intentions." Here, then, we are distinctly authorized to consider the Dedication prefixed to the *De Ventis* as intended to serve for the role of the Third Part of the *Instauration*. It appears probable, too, from the manner in which the *History of the Reign of Henry the Eighth* is mentioned, that it is a mere commencement of that work which still exists in all of it that ever was prepared.*

In the Preface Rawley, after stating that he had had the honour to be continually with his lordship in the compiling of the work, and to be employed therein, proceeds:—"I have heard his lordship often say, that, if he should have served the glory of his own name, he had been better not to have published this Natural History; for it may seem an undigested heap of particulars, and cannot have that lustre which books cast into medals have; but that he resolved to prefer the good of man, and that which might best secure it, before anything that might have relation to himself. . . . Besides, this Natural History was a debt of his, being assigned and set down for a Third Part of the *Instauration*. . . . He hopeth by this means to quit himself of that for which he taketh himself in a tight bound, and that is, the advancement of all learning and sciences. For, having in this present work collected the materials for the building, and in his *Novum Organum*, of which his lordship is yet to publish a second Part, set down the instruments and directions for the work, men shall now be wanting to themselves if they raise not knowledge to that perfection whereof the nature of mortal men is capable. And in this behalf I have heard his lordship speak complainingly that his lordship, who thinketh he deserveth to be an architect in this building, should be forced to be a workman and a labourer, and to dig the clay and burn the brick;

* See the present work, vol. i. pp. 212, 213. But this deduction would induce us to withdraw the conjecture there suggested, that more of the History was probably written than the fragment that has come down to us.

with which he moved so slowly." The translation of the *Third Century* by this person was in possession of son, who subjoins a small specimen of it; that of two preceding *Centuries* he believed to be lost. As Gruter's translation is reprinted in the edition of Bacon's collected works ('Francisci Baconi, Baronis, Opera Omnia quae extant'), published, in folio, at Amsterdam in 1665.

The English work, as we have already mentioned, continued extremely popular. No fewer than ten editions of it, all in folio, were published in the first half-century after Bacon's death. It is indeed full of curious matter; of facts, speculations, and suggestions, which have interested readers of almost all classes. It is in this respect in physics what the *Essays* were in morals; and might be said, too, like them, to "come home to men's business and bosoms." The thousand experiments offered a variety in which every reader might find something to his taste; and an abundance, which, in those days of spare literary feeding, would last out a lifetime. Nor has the collection by any means lost all its interest. The progress of science has tested many both of the speculations and the facts in which Bacon placed his confidence; but they do not thereby the less illustrate both the character of his mind and the state of science in his day. And perhaps, even in the present advanced state of our knowledge, a little light or a useful hint may here and there be derived from the work. It is now but seldom looked into,—less frequently, perhaps, than any of Bacon's other writings. But, besides the ingenuity and striking character of many of the observations, there are numerous passages in which, having all his characteristic eloquence, all his beauty and brilliancy of expression. There is little method, for the greater part, as Rawley's Preface intimates, in the arrangement of the entries, or experiments, as they are ordered; but in the following specimens we have preserved the numerical designation of each for the sake of reference :—

1. Dig a pit upon the sea-shore somewhat above the high-

rds, stopping the neb with your finger; then dip the t within the second glass and remove your finger; in that posture for a time, and it will unminge the he water; the wine ascending and settling in the upper glass, and the water descending and settling m of the lower glass. The passage is apparent to r you shall see the wine, as it were, in a small vein, gh the water. For handsomeness sake (because ; requireth some small time) it were good you hang glass upon a nail. But as soon as there is gathered are and unmixed water in the bottom of the lower at the mouth of the upper glass dippeth into it, the seth.

the upper glass be wine and the lower water, there o motion at all. Let the upper glass be water pure, water coloured, or contrarywise, there followeth no ll; but it hath been tried, that though the mixture l water in the lower glass be three parts water and ne, yet it doth not dead the motion. This separa- er and wine appeareth to be made by weight; for it bodies of unequal weight or else it worketh not; and : body must ever be in the upper glass. But then that the water being made pensible, and there being ight of water in the belly of the glass, sustained by lar of water in the neck of the glass, it is that which motion on work; for water and wine in one glass, standing, will hardly sever.

e violets, and infuse a good pugill of them in a negar; let them stay three-quarters of an hour, and forth; and refresh the infusion with like quantity of s seven times, and it will make a vinegar so fresh of as if a twelvemonth after it be brought you in a u shall smell it before it come at you. Note, that it ore perfectly of the flower a good while after than at

s reported by some of the ancients that whelps, or ures, if they be put young into such a cage or box as it rise to their stature, but may increase in breadth will grow accordingly as they can get room; which rue and feasible, and that the young creature so id straightened doth not thereupon die, it is a means e dwarf creatures, and in a very strange figure. tain and noted long since, that the pressure or form-

derkin a great bung-hole of purpose ; then thrust into it the alter (in which the capons are) drawn out in length ; let it ep in it three days and three nights, the bung-hole open, to rk ; then close the bung-hole, and so let it continue a day and half ; then draw it into bottles, and you may drink it well er three days' bottling, and it will last six weeks (ap-ved). It drinketh fresh, flowreth and mantleth exceed-ly ; it drinketh not newish at all ; it is an excellent drink a consumption, to be drunk either alone or carded with ne other beer. It quencheth thirst, and hath no whit of idiness. Note, that it is not possible that meat and bread, er in broths or taken with drink, as is used, should get forth o the veins and outward parts so finely and easily as when s thus-incorporate and made almost a chylus aforehand.

31. Generally diseases that are chronical, as coughs, hisics, some kinds of palsies, lunacies, &c., are most dan-ous at the first, therefore a wise physician will consider ether a disease be incurable, or whether the just cure of it be : full of peril ; and if he find it to be such, let him resort to liation, and alleviate the symptom without busying himself much with the perfect cure ; and many times (if the patient indeed patient) that course will exceed all expectation. kewise the patient himself may strive, by little and little, to ercome the symptom, in the exacerbation, and so, by time, n suffering into nature.

69. The producing of cold is a thing very worthy the inqui-ion, both for use and disclosure of causes ; for heat and cold e nature's two hands, whereby she chiefly worketh ; and heat : have in readiness, in respect of the fire ; but for cold we ast stay till it cometh, or seek it in deep caves or high ountains : and when all is done we cannot obtain it in any eat degree, for furnaces of fire are far hotter than a summer's n ; but vaults or hills are not much colder than a winter's est.

74. It were not amiss to try opium, by laying it upon the p of a weather-glass, to see whether it will contract the air ; it I doubt it will not succeed ; for besides that the virtue of ium will hardly penetrate through such a body as glass, I nceive that opium and the like make the spirits fly rather by aliginity than by cold.

75. There is an opiuiou that the moon is magnetical of heat, the sun is of cold and moisture ; it were not amiss, therefore, try it with warm waters ; the one exposed to the beams of the

dingly, as much as wine from water, and as wood sometimes they will have them to be natural heat, of the element of fire, whereas some of them are cold ; and sometimes they will have them to be the qualities of the tangible parts, which they see, by are things by themselves. And then, when they ants and living creatures, they call them souls ; and ical speculations they have, like prospectives, that inward when they are but paintings. Neither is ion of words, but infinitely material in nature ; for nothing else but a natural body, rarified to a pro- included in the tangible parts of bodies as in an ; and they be no less differing one from the other use or tangible parts ; and they are in all tangible tsoever, more or less ; and they are never, almost, d from them and their motions principally proceed colligation, concoction, maturation, putrefaction, and most of the effects of nature ; for, as we have n in our *Sapientia Veterum*, in the fable of Proser- all in the infernal regiment hear little doings of most of Proserpina ; for tangible parts in bodies are gs ; and the spirits do, in effect, all.

ere is nothing more certain in nature than that it is for any body to be utterly annihilated ; but that, as work of the omnipotency of God to make somewhat so it requireth the like omnipotency to turn some- othing ; and therefore it is well said by an obscure e sect of the chymists, that there is no such way to range transmutations of bodies, as to endeavour and l means the reducing of them to nothing : and utained also a great secret of preservation of bodies e ; for if you can prohibit that they neither turn into no air cometh to them ; nor go into the bodies ad- ause they are utterly heterogeneous ; nor make a circulation within themselves ; they will never ough they be in their nature never so perishable or We see how flies and spiders, and the like, get a n amber, more durable than the monument and of the body of any king.

s to be noted (the rather lest any man should think : anything in this number of eight to create the hat this computation of eight is a thing rather re- a any true computation ; for a true computation

127. It hath been anciently reported, and is still received that extreme applauses and shouting of people assembled in great multitudes, have so rarified and broken the air, that birds flying over have fallen down, the air being not able to support them. And it is believed by some that great ringing of bells in populous cities hath chased away thunder, and also dissipated pestilent air; all which may be also from the concussion of the air and not from the sound.

128. A very great sound, near hand, hath stricken many deaf; and at the instant they have found, as it were, the breaking of a skin or parchment in their ear; and myself standing near one that lured loud and shrill, had suddenly an offence, as if somewhat had broken or been dislocated in my ear, and immediately after a loud ringing (not an ordinary singing, or hissing, but far louder and differing); so as I feared some deafness; but after some half quarter of an hour vanished.

134. Take one vessel of silver and another of wood, and fill each of them full of water, and then nap the tongs together before, about a handful from the bottom, and you shall find the sound much more resounding from the vessel of silver than from that of wood; and yet if there be no water in the vessel so that you nap the tongs in the air, you shall find no difference between the silver and the wooden vessel; whereby, besides the main point of creating sound without air, you may collect two things; the one, that the sound communicateth with the bottom of the vessel; the other, that such a communication passeth far better through water than air.

140. There is in St. James's Fields a conduit of brick, under which joineth a low vault; and at the end of that a round house of stone; and in the brick conduit there is a window and in the round-house a slit or rift of some little breadth; if you cry out in the rift it will make a fearful roaring at the window. The cause is the same with the former; for that as concaves that proceed from more narrow to more broad, do amplify the sound at the coming out.

155. And as for water it is a certain trial; let a man go into a bath and take a pail, and turn the bottom upward, and carry the mouth of it even down to the level of the water, and so press it down under the water, some handful and a half, still keeping it even that it may not tilt on either side, and so the air get out; then let him that is in the bath dive with his head so far under water as he may put his head into the pail, w

ude unto the articulate letters: as trembling of water bath
 emblance with the letter *l*; quenching of hot metals, with
 letter *z*; snarling of dogs, with the letter *r*; the noise of
 eech-owls, with the letter *sh*; voice of cats, with the diphthong
 voice of cuckoos, with the diphthong *ou*; sounds of strings,
 h the letter *ng*; so that if a man (for curiosity or strangeness
 e) would make a puppet or other dead body to pronounce a
 rd, let him consider, on the one part, the motion of the
 truments of voice; and on the other part, the like sounds
 de in inanimate bodies; and what conformity there is that
 iseth the similitude of sounds, and by that he may minister
 ht to that effect.

225. The sweetest and best harmony is, when every part or
 trument is not heard by itself, but a conflation of them all,
 ich requireth to stand some distance off: even as it is in the
 xture of perfumes, or the taking of the smells of several
 wers in the air.

236. It is a strange thing in nature, when it is attentively
 sidered, how children and some birds learn to imitate
 ech. They take no mark at all of the motion of the mouth
 him that speaketh, for birds are as well taught in the dark
 by light. The sounds of speech are very curious and ex-
 isite, so one would think it were a lesson hard to learn. It
 true that it is done with time, and by little and little, and
 th many essays and proffers, but all this dischargeth not the
 nder. It would make a man think (though this which we
 all say may seem exceeding strange) that there is some
 nmission of spirits, and that the spirits of the teacher put in
 tion should work with the spirits of the learner, a predispo-
 ion to offer to imitate, and so to perfect the imitation by
 grees. But, touching operations by transmissions of spirits
 hich is one of the highest secrets in nature) we shall speak
 due place, chiefly when we come to inquire of imagination.
 at, as for imitation, it is certain that there is in men and
 er creatures a predisposition to imitate. We see how ready
 es and monkeys are to imitate all motions of man; and, in
 e catching of dotterels, we see how the foolish bird playeth the
 e in gestures; and no man, in effect, doth accompany with
 vers, but he learneth, ere he is aware, some gesture, or voice,
 fashion of the other.

239. But I conceive that the aptness of birds is not so much
 the conformity of the organs of speech as in their attention;
 speech must come by hearing and learning; and birds

pirits, and of good spirits; for (said he) call Satan, and the echo will not deliver back the Devil's name, but will say *Va t'en*, which is as much in French as *Apage*, or *Avoid*: and hereby I did hap to find that an echo would not return s, being but a hissing, and an interior sound.

285. Let it be tried, for the help of the hearing (and I conceive it likely to succeed), to make an instrument like a tunnel, the narrow part whereof may be of the bigness of the hole of the ear, and the broader end much larger, like a bell at the skirts, and the length half a foot or more; and let the narrow end of it be set close to the ear, and mark whether any sound abroad in the open air will not be heard distinctly from further distance than without that instrument, being, as it were, an ear-spectacle. And I have heard there is in Spain an instrument in use to be set to the ear, that helpeth somewhat those that are thick of hearing.

290. We have laboured, as may appear, in this inquisition of sounds diligently, both because sound is one of the most hidden portions of nature (as we said in the beginning), and because it is a virtue which may be called incorporeal and immateriate, whereof there be in nature but few; besides, we were willing now, in these our first Centuries, to make a pattern or president of an exact inquisition, and we shall do the like hereafter in some other subjects which require it; for we desire that men should learn and perceive how severe a thing the true inquisition of nature is, and should accustom themselves, by the light of particulars, to enlarge their minds to the amplitude of the world, and not reduce the world to the narrowness of their minds.

317. There were taken apples, and laid in straw, in hay, in flower, in chalk, in lime, covered over with onions, covered over with crabs, closed up in wax, shut in a box, &c.; there was also an apple hanged up in smoke, of all which the experiment sorted in this manner:—

318. After a month's space the apple inclosed in wax was as green and fresh as at the first putting in, and the kernels continued white. The cause is, for that all exclusion of open air (which is ever predatory) maintaineth the body in his first freshness and moisture, but the inconvenience is that it tasteth a little of the wax, which, I suppose, in a pomegranate, or some such thick-coated fruit, it would not do.

319. The apple hanged in the smoke turned like an old mellow apple, wrinkled, dry, soft, sweet, yellow within. The cause

e crudities, impurities, and leprosites of metals were cured, they would become gold, and that a little quantity of the medicine in the work of projection will turn a sea of the baser metal into gold, by multiplying: all these are but dreams, and so are many other grounds of alchemy; and, to help the matter, the alchemists call in likewise many vanities out of astrology, natural magic, superstitious interpretations of prophecies, auricular traditions, feigned testimonies of ancient authors, and the like. It is true, on the other side, they have sought to light not a few profitable experiments, and thereby made the world some amends; but we, when we shall come to handle the version and transmutation of bodies, and the experiments concerning metals and minerals, will lay open the true ways and passages of nature, which may lead to this great effect. And we commend the wit of the Chinese, who despair of making of gold, but are mad upon the making of silver, for certain it is, that it is more difficult to make gold (which is the most ponderous and materiate amongst metals) of other metals less ponderous and less materiate, than *viâ versâ* to make silver of lead or quicksilver, both which are more ponderous than silver; so that they need rather a further degree of rarefaction than any condensation. In the mean time, by occasion of handling the axioms touching maturation, we will direct a scholar touching the maturing of metals, and thereby turning some of them into gold; for we conceive, indeed, that a perfect good concoction, or digestion, or maturation of some metals will produce gold. And here we call to mind, that we knew a Dutchman that had wrought himself into the belief of a great person, by undertaking that he could make gold, whose discourse was, that gold might be made, but that the chemists over-fired the work; for, he said, the making of gold did require a very temperate heat, as being in nature a subterranean work, where little heat cometh, but yet more to the making of gold than of any other metal; and, therefore, that he would do it with a great lamp that should carry a moderate and equal heat, and that it was the work of many months. The device of the lamp was folly; but the over-estimating now used, and the equal heat to be required, and the making it a work of some good time, are no ill discourses.

Let there be a small furnace made of a temperate heat; let the heat be such as may keep the metal perpetually molten, and no more, for that above all importeth to the work. For the material, take silver, which is the metal that in nature

ained not at the first, but after a night's lying
 o shine. 8. There was other wood that did
 eing laid dry in the house, within five or six
 ining, and, laid abroad again, recovered the
 ning woods being laid in a dry room, within
 t their shining, but being laid in a cellar, or
 the shining. 10. The boring of holes in that
 nd then laying it abroad, seemeth to conduce
 . The cause is, for that all solution of con-
 on putrefaction, as was touched before. 11. No
 yet tried to shine that was cut down alive, but
 ted, both in stock and root, while it grew.
 wood that shined was steeped in oil, and re-
 ing a fortnight. 13. The like succeeded in
 water, and much better. 14. How long the
 inue if the wood be laid abroad every night,
 l sprinkled with water in the day, is not yet
 l was made of laying it abroad in frosty
 urt it not. 16. There was a great piece of a
 pine, and the shining part was cut off till no
 t, after two nights, though it was kept in a
 a shining.

erate growth or stature, it must proceed either
 of the nourishment or from the nature of
 or from the quickening and exciting of
 . For the first excess of nourishment is
 maketh the child corpulent, and growing
 than in height. And you may take an ex-
 ants, which if they spread much are seldom
 e nature of the nourishment, first, it may
 and, therefore, children in dairy countries
 all than where they feed more upon bread
 e is also a received tale that boiling of daisy
 ich it is certain are great driers) will make
 Neither is it without cause that Xenophon,
 of the Persian children, doth so much com-
 ing upon cardamon, which, he saith, made
 , and be of a more active habit. Cardamon
 urtium, and with us, water-cresses, which, it
 herb that, whilst it is young, is friendly to
 quickening of natural heat, it must be done
 ise, and therefore, no doubt, much going to
 y sit so much, hindereth the growth of chil-

a glass with narrow mouths, stuffing them close together, without bruising; stop the bottle or glass close, and these will retain not only their smell perfect, but their colour for a year at least. . . . Note, that these roses, when you take them from the drying, have little or no smell, so that the smell is a second smell that issueth out of the flower afterwards.

77. An orange, lemon, and apple, wrapped in a linen cloth, being buried for a fortnight's space four foot deep within the earth, though it were in a moist place and a rainy time, yet they come forth no ways mouldy or rotten, but were become a little harder than they were, otherwise fresh in their colour, but their juice somewhat flatted; but with the burial of a fortnight more they became putrified.

78. A bottle of beer buried in like manner as before, came more lively, better tasted, and clearer than it was; a bottle of wine in like manner. A bottle of vinegar so buried, came forth more lively and more odoriferous, smelling almost like a violet: and after the whole month's burial, all the wine came forth as fresh and lively, if not better, than before.

79. It were a profitable experiment to preserve oranges, lemons, and pomegranates till summer, for then their price will be mightily increased. This may be done, if you put them in a pot or vessel well covered, that the moisture of the earth come not at them; or else by putting them in a conservatory of snow. And, generally, whosoever will make experiments of cold, let him be provided of three things—a conservatory of snow, a good large vault, twenty feet at least under the ground, and a deep well.

86. Divers we see do stut. The cause may be (in most) refrigeration of the tongue, whereby it is less apt to move; and therefore, we see that naturals do generally stut; and we see that in those that stut, if they drink wine moderately, they stut less, because it heateth; and so we see that they that stut stut more in the first offer to speak than in continuance, because the tongue is by motion somewhat heated; in some, however, it may be (though rarely) the dryness of the tongue, which likewise maketh it less apt to move, as well as cold: for we find an affect that cometh to some wise and great men, as it cometh unto Moses, who was *linguæ præpeditæ*; and many stutters, besides, are very choleric men, cholera inducing a dryness in the tongue.

90. Some creatures do move a good while after their heads

ld have been the speedier. This is a noble ex-
for, without this help, they would have been four
ng in coming up; but there doth not occur to me
ent any use thereof for profit, except it should be
of peas, which have their price very much increased
y coming. It may be tried also with cherries, straw-
d other fruit, which are dearest when they come

t the most admirable acceleration by facilitating
ment, is that of water; for a standard of a damask-
he root on was set in a chamber where no fire was,
an earthen pan full of fair water, without any
alf a foot under the water, the standard being more
ot high above the water. Within the space of ten
andard did put forth a fair green leaf, and some
buds, which stood at a stay, without any show of
ithering, more than seven days; but afterwards that
but the young buds did sprout on, which after-
ed into fair leaves in the space of three months, and
so a while after, till upon removal we left the trial.
that the leaves were somewhat paler and lighter-
nan the leaves used to be abroad. Note, that the
were in the end of October; and it is likely that if it
in the spring time it would have put forth with
ength, and (it may be) to have grown on to bear
by this means you may have (as it seemeth) roses
midst of a pool, being supported with some stay,
atter of rareness and pleasure, though of small use.
e more strange, for that the like rose-standard was
: same time into water mixed with horserding, the
about the fourth part to the water, and in four
ace (while it was observed) put not forth any leaf,
ers buds at the first, as the other.

seemeth by these instances of water, that for nourish-
water is almost all in all, and that the earth doth but
plant upright and save it from over-heat and over-
therefore is a comfortable experiment for good

is an assured experience, that a heap of flint or stone
the bottom of a wild tree (as in oak, elm, ash, &c.)
first planting, doth make it prosper double as much
it: the cause is, for that it retaineth the moisture
eth at any time upon the tree, and suffereth it.

they will come up in one stock; but yet they will put their several fruits without any commixture in the wherein note (by the way) that unity of continuance procure than unity of species. It is reported also of red and white grapes being set in the ground, and parts being flatted and bound close together, will grapes of the several colours upon the same branch, and stones of several colours within the same grape; but after a year or two, the unity (as it seemeth) growing defect; and this will likewise help, if from the first they be often watered, for all moisture helpeth to bind it is prescribed also to bind the bud as soon as forth, as well as the stock, at the least for a time.

It is reported that the shrub called our lady's seal (a kind of briony), and coleworts, set near together, they will die. The cause is, for that they be both great sors of the earth, and one of them starveth the other. It is said of reed and a brake, both which are succulent; therefore the one deceiveth the other; and the like of rue and rue, both which draw strong juices.

It is a curiosity to have several fruits upon one tree; more when some of them come early and some come late, that you may have upon the same tree ripe fruits all the year; this is easily done by grafting of several scions upon the boughs of a stock, in a good ground plentifully fed. You may have all kinds of cherries, and all kinds of plums, peaches, and apricots, upon one tree; but I conceive the nature of fruits must be such as will graft upon the same stock; therefore I doubt whether you can have apples, or oranges, upon the same stock upon which you graft

It is a curiosity to have fruits of divers shapes and this is easily performed by moulding them when they are young with moulds of earth or wood; so you may have them round, &c. as long as a cane, or as round as a sphere, or like a cross. You may have also apples in the form of lemons. You may have also fruit in more accurate likenesses we said of men, beasts, or birds, according as you have moulds; wherein you must understand, that your mould be big enough to contain the whole fruit when it is to the greatest, for else you will choke the spreading of it, which otherwise would spread itself and fill the space; and so be turned into the shape desired, as it is in

mould-works of liquid things. See that the keeping of the sun from it there is ordinary experience of fire. *Quære* also whether some small hole in wood to let in the sun. And note, the moulds partible, glued, or cemented open them when you take out the fruit.

503. It is a curiosity to have small fruit or trees. This is easily performed by a needle or bodkin, or knife, or the like, are you ing, for as they grow so the leaf and graphical.

— *Teneræque meos in Arboribus, crescent illæ, cæ*

504. You may have trees apparently by boring holes in the bodies of the earth holpen with muck, and setting strawberries, wild thyme, camomile, &c. in earth, where it they do but grow, & pots, though perhaps with some force would be tried also with shoots of vine for it may be, they being of a more intimate with the tree itself.

505. It is an ordinary curiosity to have rosemary, juniper, and the like) in pots done by moulding them within, and but they are but lame things, being Great castles made of trees upon frames and arches, were anciently matters of

514. The making of fruits without seeds is a curiosity, and somewhat better, but them so is like to make them more like a sun or shoot, fit to be set in the ground taken forth and not altogether, but save the life) it will bear a fruit without. And the like is said to be of dividing ground, and taking out the path and

515. It is reported also that a child will have small or no seeds; and if some fruit grafted upon a stock that may both make the fruit sweeter and purer of kernels or seeds.

It is reported that not only the taking out of the pith, stopping of the juice of the pith from rising in the wood, and turning it to rise on the outside, will make the without core or stone; as if you should bore a tree clean and put a wedge in. It is true there is some affinity between the pith and the kernel, because they are both of a substance and both placed in the midst.

It is reported that trees watered perpetually with warm water will make a fruit with little or no core or stone. And it is general, that whatsoever will make a wild tree a tree, will make a garden tree to have less core or stone. There is an old tradition that boughs of oak put into water will put forth wild vines; which if it be true (no doubt it is not the oak that turneth into a vine, but the oak-water, fertilizing, qualifieth the earth to put forth a vine of

It is not impossible, and I have heard it verified, that cutting down of an old timber tree, the stub hath put out as a tree of another kind, as that beech hath put forth hickory; which if it be true, the cause may be, for that the old tree is so scant of juice to put forth the former tree, and therefore put forth a tree of smaller kind that needeth less nutriment.

There is an opinion in the country, that if the same ground be oft sown with the grain that grew upon it, it will, in time, grow to be of a baser kind.

It is certain that, in sterile years, corn sown will grow of a baser kind.

Work of the transmutation of plants one into another, is *glia naturæ*; for the transmutation of species is, in the philosophy, pronounced impossible; and certainly it is of great difficulty, and requireth deep search into nature; and though there appear some manifest instances of it, the proof of impossibility is to be rejected, and the means thereof found out. We see that, in living creatures that come from one action, there is much transmutation of one into another, pillars turn into flies, &c. And it should seem probable, that whatsoever creature having life is generated without seed, that creature will change out of one species into another; the seed and the nature of it which locketh and boundeth the creature, that it doth not expatiate. So as we may conclude, that seeing the earth of itself doth put forth without seed, therefore plants may well have a trans-

which come more early, and others which come more late in the year. The flowers that come early with us are, prime-roses, violets, anemonies, water-daffadillies, crocus vernus, and some early tulippas; and they are all cold plants, which therefore (as it should seem) have a quicker perception of the heat of the sun increasing than the hot herbs have; as a cold hand will sooner find a little warmth than a hot. And those that come next after are wallflowers, cowslips, hyacinths, rosemary-flowers, &c.; and after them pinks, roses, flowerdeluces, &c.; and the latest are gillyflowers, hollyhocks, larksfoot, &c. The earliest blossoms are the blossoms of peaches, almonds, cornelians, mezerions, &c; and they are of such trees as have much moisture, either watery or oily; and therefore crocus vernus also, being an herb that hath an oily juice, putteth forth early, for those also find the sun sooner than the drier trees. The grains are, first rye and wheat, then oats and barley, then peas and beans; for though green peas and beans be eaten sooner, yet the dry ones, that are used for horsemeat, are ripe last; and it seemeth that the fatter grain cometh first. The earliest fruits are strawberries, cherries, gooseberries, currants; and after them early apples, early pears, apricots, rasps; and after them damasins and most kind of plums, peaches, &c.; and the latest are apples, wardenes, grapes, nuts, quinces, almonds, sloes, briar-berries, hips, medlars, services, cornelians, &c.

578. It is to be noted that commonly trees that ripen latest blossom soonest, as peaches, cornelians, sloes, almonds, &c.; and it seemeth to be a work of Providence that they blossom so soon, for otherwise they could not have the sun long enough to ripen.

590. Flowers have all exquisite figures; and the flower-numbers are chiefly five and four, as in prime-roses, briar-roses, single musk-roses, single-pinks, and gillyflowers, &c., which have five leaves; lillies, flowerdeluces, borage, bugloss, &c., which have four leaves. But some put forth leaves not numbered, but they are ever small ones, as marygolds, trefoil, &c. We see also that the sockets and supporters of flowers are figured, as in the five brethren of the rose, sockets of gillyflowers, &c. Leaves also are all figured, some round, some long, none square, and many jagged on the sides, which leaves of flowers seldom are.

606. I left once, by chance, a citron cut, in a close room for three summer months that I was absent, and at my return

riseth again. It seemeth, that amongst plants which are nourished with mixture of earth and water, it draweth most nourishment from water, which maketh it the smoothest of all others in bark, and the hollowest in body.

660. The putting forth of certain herbs discovereth of what nature the ground where they put forth is; as wild thyme showeth good feeding-ground for cattle; bettouny and strawberries showeth grounds fit for wood; camomile showeth mellow grounds fit for wheat; mustard-seed, growing after the plough, showeth a good strong ground also for wheat; burnet showeth good meadow, and the like.

670. The remedies of the diseases of corn have been observed as followeth :—The steeping of the grain, before sowing, a little time in wine, is thought a preservative; the mingling of seed-corn with ashes is thought to be good; the sowing at the wane of the moon is thought to make the corn sound. It hath not been practised, but it is thought to be of use, to make some miscellany in corn, as if you sow a few beans with wheat your wheat will be the better. It hath been observed that the sowing of corn with houseleek doth good. Though grain that toucheth oil or fat receiveth hurt, yet the steeping of it in the dregs of oil, when it beginneth to putrify (which they call *amurca*), is thought to assure it against worms. It is reported also that if corn be mowed it will make the grain longer but emptier, and having more of the husk.

678. You may turn almost all flesh into a fatty substance, if you take flesh and cut it into pieces, and put the pieces into a glass covered with parchment, and so let the glass stand six or seven hours in boiling water. It may be an experiment of profit, for making of fat or grease, for many uses, but then it must be of such flesh as is not edible, as horses, dogs, bears, foxes, badgers, &c.

679. It is reported by one of the ancients that new wine, put into vessels well stopped and the vessels let down into the sea, will accelerate very much the making of them ripe and potable; the same would be tried in wort.

691. It was observed in the great plague of the last year, that there were seen, in divers ditches and low grounds about London, many toads that had tails, two or three inches long at the least; whereas toads (usually) have no tails at all; which argueth a great disposition to putrefaction in the soil and air. It is reported likewise that roots (such as carrots and parsnips) are more sweet and luscious in infectious years than in other years.

692. Wise physicians should with all diligence inquire what simples nature yieldeth that have extreme subtle parts without any mordication or acrimony, for they undermine that which is hard, they open that which is stopped and shut, and they expel that which is offensive, gently, without too much perturbation. Of this kind are elder-flowers, which therefore are proper for the stone, of this kind is the dwarf pine, which is proper for the jaundice; of this kind is hartshorn, which is proper for agues and infections; of this kind is piony, which is proper for stoppings in the head, of this kind is fumitory, which is proper for the spleen; and a number of other. Generally, divers creatures bred of putrefaction, though they be somewhat loathsome to take, are of this kind, as earth-worms, timber-worms, snails, &c. And I conceive that the crochets of vipers (which are so much magnified) and the blood of snakes some ways conditell and corrected (which of late is grown into some credit,) are of the same nature. So the parts of beasts putrified (as castoreum and musk, which have extreme subtle parts) are to be placed amongst them. We see also that putrefaction of plants, as agarick and jew's ear) are of greatest virtue; the cause is, for that putrefaction is the subtlest of all motions in the parts of bodies, and since we cannot take down the lives of living creatures (which some of the Paracelsians say if they could be taken down, would make us immortal) the next is for subtlety of operation, to take bodies putrified, such as may be safely taken.

696. It is affirmed both by the ancient and modern observation, that in furnaces of copper and brass, where chalcites (which is vitriol) often cast in, to mend the working, they meet suddenly a fly, which sometimes moveth, as if it too hold in the walls of the furnace, sometimes is seen moving to the fire below, and dieth presently, as soon as it is out of the furnace, which is a noble instance and worthy to be weighed for it sheweth that as well violent heat of fire as the gentle heat of living creatures, will vivify if it have matter proportionable. Now the great axiom of vivification is, that there must be heat to dilate the spirit of the body, an active spirit to be dilated, matter, viscous or tenacious, to hold in the spirit, and that matter to be put forth and figured. Now a spirit dilated by so ardent a fire as that of the furnace, as soon as ever it cooleth never so little, congregate presently. And (without doubt) this action is furthered by the chalcites, which has spirit, that will put forth and germinate, as we see in chalcites.

It is true that they have (some of them) diaphragm intestine; and they have all skins, which in most of insecta are cast often. They are not generally of long life; bees have been known to live seven years; and snakes might the rather for the casting of their spoil, to live till old; and eels, which many times breed of putrefaction, will live and grow very long; and those that inter-change from worms to flies in the summer, and from flies to men in the winter, have been kept in boxes four years at a time.

The insecta have voluntary motion, and therefore imagination; and whereas some of the ancients have said, that motion is indeterminate and their imagination indefinite, diligently observed, for ants go right forwards to their food and bees do admirably know the way from a flowery field two or three miles off, to their hives. It may be gnats and flies have their imagination more mutable and giddy, as birds likewise have. It is said by some of the ancients that they have only the sense of feeling, which is manifestly false; for if they go forth right to a place they must needs know the way; besides, they delight more in one flower or herb than another, and therefore have taste; and bees are called upon and upon brass, and therefore they have hearing, which is likewise that though their spirits be diffused, yet there is a centre of their senses in their head.

The Turkish bow giveth a very forcible shoot; in so much that it hath been known that the arrow hath pierced a steel plate and a piece of brass of two inches thick. But that which is most strange, the arrow, if it be headed with wood, hath been known to pierce through a piece of wood of eight inches thick. And it is certain that we had in use at one time, for war, short arrows which they called sprights, without any iron heads save wood sharpened, which were discharged out of bows, and would pierce through the sides of ships where iron would not pierce. But this dependeth upon one of the most secret secrets in all nature, which is, that similitude of motion will cause attraction where the body is wholly freed from the motion of gravity; for if that were taken away, lead would draw lead, and gold would draw gold, and iron would draw iron, without the help of the loadstone. But this same law of weight or gravity (which is mere motion of matter, without any affinity with the form or kind) doth kill the other, except itself be killed by a violent motion: and in

these instances of arrows; for then the motion of attraction and similitude of substance beginneth to show itself.

705 They have in Turkey and the East, certain confections which they call servets, which are like to candied conserve and are made of sugar and lemons, or sugar and citrons, or sugar and violets, and some other flowers, and some mixture of amber for the more delicate persons; and those they dissolve in water, and thereof make their drink, because they are forbidden wine by their law. But I do much marvel that an English man, or Dutchman, or German dath set up brewing in Constantinople, considering they have such quantity of barley. For as for the general sort of men, fragility may be the cause of drinking water, for that it is no small saving to pay nothing for one's drink, but the better sort might well be at the cost. And yet I wonder the less at it, because I see France, Italy, and Spain have not taken into use beer or ale, which perhaps if they did, would better both their healths and their complexion. It is likely it would be matter of great gain to any that should begin it in Turkey.

721. Laughing causeth a dilatation of the mouth and lips, continued expulsion of the breath, with the loud noise which maketh the interjection of laughing, shaking of the breast and sides, running of the eyes with water if it be violent and continued. Wherein first it is to be understood, that laughing is scarce properly a passion, but hath his source from the intellect, for in laughing there ever precedeth a conceit of some what ridiculous, and therefore it is proper to man. Secondly, that the cause of laughing is but a light touch of the spirit and not so deep an impression as in other passions. And therefore (that which hath no affinity with the passions of the mind) it is moved, and that in great vehemency, only by tickling some parts of the body; and we see that men, even in a grievous state of mind, yet cannot sometimes forbear laughing. Thirdly, it is ever joined with some degree of delight, and therefore exhalation hath some affinity with joy, though it be much lighter motion. *res severa est verum gaudium.* Fourthly, the object of it is deformity, absurdity, shrewd turns, and the like. Now to speak of the causes of the effects before mentioned, whereunto these general notes give some light. For the dilatation of the mouth and lips, continued expulsion of the breath and voice, and shaking of the breast and sides, they proceed all from the dilatation of the spirits, especially laughing sudden. So likewise the running of the eyes

water (as hath been formerly touched, where we spake of the tears of joy and grief), is an effect of dilatation of the spirits. And for suddenness, it is a great part of the matter : for we see that any shrewd turn that lighteth upon another, or any deformity, &c., moveth laughter in the instant, which, after a little time, it doth not. So we cannot laugh at any thing after it is stale, but whilst it is new. And even in tickling, if you tickle the sides, and give warning, or give a hard or continued touch, it doth not move laughter so much.

738. They have in Turkey a drink called Coffa, made of a berry of the same name, as black as soot, and of a strong scent, but not aromatical, which they take, beaten into powder in water, as hot as they can drink it; and they take it and sit at it in their coffa-houses, which are like our taverns. This drink comforteth the brain and heart, and helpeth digestion. Certainly this berry coffa, the root and leaf betel, the leaf tobacco, and the tear of poppy (opium), of which the Turks are great takers (supposing it expelleth all fear), do all condense the spirits and make them strong and aleger. But it seemeth they are taken after several manners : for coffa and opium are taken down, tobacco but in smoke, and betel is but champed in the mouth with a little lime. It is like there are more of them, if they were well found out and well corrected. Quære of henbane-seed, of mandrake, of saffron-root and flower, of folium indum, of ambergris, of the Assyrian amomum, if it may be had, and of the scarlet powder which they call kermes, and generally of all such things as do inebriate and provoke sleep. Note, that tobacco is not taken in root or seed, which are more forcible ever than leaves.

739. The Turks have a black powder, made of a mineral called alchole, which, with a fine long pencil, they lay under their eyelids, which doth colour them black, whereby the white of the eye is set off more white. With the same powder they colour also the hairs of their eyelids and of their eyebrows which they draw into embowed arches. You shall find that Xenophon maketh mention that the Medes used to paint their eyes. The Turks use with the same tincture to colour the hair of their heads and beards black : and divers with us that are grown grey, and yet would appear young, find means to make their hair black by combing it (as they say) with a leaden comb, or the like. As for the Chinese, who are of a ill complexion (being olivaster), they paint their cheeks scarlet, especially their king and grandees. Generally, b

pure bodies, ulcers or hurts in the legs are hard to cure, and in the head more easy. The cause is, for that ulcers or hurts in the legs require desiccation, which by the refluxion of humours to the lower parts is hindered; whereas hurts and ulcers in the head require it not, but, contrarywise dryness maketh them more apt to consolidate.

789. Weigh iron and aquafortis severally, then dissolve the iron in the aquafortis, and weigh the dissolution, and you shall find it to bear as good weight as the bodies did severally, notwithstanding a good deal of waste by a thick vapour that issueth during the working, which sheweth that the opening of a body doth increase the weight. This was tried once or twice, but I know not whether there were any error in the trial.

794. There is in the city of Ticinum, in Italy, a church that hath windows only from above, it is in length an hundred feet, in breadth twenty feet, and in height near fifty, having a door in the midst. It reporteth the voice twelve or thirteen times, if you stand by the close end wall over against the door. The echo saith, and dieth by little and little, as the echo at Pont Charenton doth. And the voice soundeth as if it came from above the door. And if you stand at the lower end, or on either side of the door, the echo holdeth, but if you stand in the door, or in the midst just over against the door, not. Note, that all echoes sound better against old walls than new, because they are more dry and hollow.

795. Those effects which are wrought by the percussion of the sense, and by things in fact, are produced likewise in some degree by the imagination. Therefore, if a man see another that scur or acid things which set the teeth on edge this effect maketh the imagination; so that he that seeth the thing done by another hath his own teeth also set on edge. So, if a man see another turn swiftly and long, or if he look upon wheels that turn, himself waxeth turn-sick; so if a man be upon a high place without rails or good hold, except he be used to it he is ready to fall, for imagining a fall, it putteth his spirit into the very action of a fall. So many upon the seeing of others bleed, or strangled, or tortured, themselves are ready to faint, as if they bled, or were in strife.

796. Take a stock gilliflower and tie it gently upon a stick, and put them both into a store-glass full of quicksilver, so that the flower be covered; then lay a little weight upon the top of the glass that may keep the stick down, and look upon them after four or five days, and you shall find the flower

796. may be more conveniently
be observed because the quicksilver presses
the stiffness of the stalk cannot be with-
the cold (as it seemeth) of the quicksilver.

797. It is reported by some of the ancients
there is a kind of iron that, being cut into
into the ground, if it be well watered, will
pieces. This is certain and known of old,
tuply and increase, as hath been seen in
which hath been put in cellars, the feet of
with leaden bands, where (after a time)
the lead did swell, insomuch as it hangeth
warts.

798. I call drowning of metals when they
is so incorporate with the more rich as
be separated again, which is a kind of venison
as if silver should be inseparably incorporated
copper and lead with silver. The ancients
it a little of silver to the gold, and made
as fit for most uses as gold, and more re-
qualified in some other properties, but they
separated. This to do privily, or to make
for the rich metal simple is an adulteration
but if it be done lawfully, and without dis-
great saving of the richer metal. I remember
man skilful in metals, that a fifteenth part
with gold will not be recovered by any

maketh them eat their meat better; and, therefore, sheep ll get up betimes in the morning to feed against rain; and ttle, and deer, and coneys will feed hard before rain; and heifer will put up his nose and snuff in the air against in.

832. It hath been observed by the ancients, that where a inbow seemeth to hang over or to touch, there breatheth forth sweet smell. The cause is, for that this happeneth but in rtain matters which have in themselves some sweetness, which e gentle dew of the rainbow doth draw forth: and the like soft showers, for they also make the ground sweet, but none e so delicate as the dew of the rainbow where it falleth; it ay be also that the water itself hath some sweetness, for the inbow consisteth of a glomeration of small drops, which cant possibly fall but from the air that is very low, and there-e may hold the very sweetness of the herbs and flowers as a stilled water.

847. Take lead and melt it, and in the midst of it, when beginneth to congeal, make a little dint or hole, and put icksilver wrapped in a piece of linen into that hole, and the icksilver will fix, and run no more, and endure the hammer. is is a noble instance of induration by consent of one body th another, and motion of excitation to imitate; for to ribe it only to the vapour of lead is less probable. Quæry, urther the fixing may be in such a degree as it will be ured like other metals? for, if so, you may make works of for some purposes, for they come not near the fire.

848. Sugar hath put down the use of honey, insomuch as e have lost those observations and preparations of honey which e ancients had when it was more in price. First, it seemeth at there was in old time tree-honey as well as bee-honey, hich was the tear or blood issuing from the tree; insomuch, one of the ancients relateth, that in Trebesond there was ney issuing from the box-trees, which made men mad. ain, in ancient time there was a kind of honey which, ther of the own nature or by art, would grow as hard as gar, and was not so luscious as ours. They had also a wine honey, which they made thus:—They crushed the honey to a great quantity of water, and then strained the liquor, ter they boiled it in a copper to the half, then they poured into earthen vessels for a small time, and after turned it to vessels of wood, and kept it for many years. They ve also at this day in Russia, and those northern coun-

infection and contagion from body to body (as the plague, and the like) it is most certain that the infection is received, many times, by the body passive; but yet it is by the strength and good disposition thereof repulsed and wrought out before it be formed in a disease; so much more in impressions from mind to mind, or from spirit to spirit, the impression taketh, but is encountered and overcome by the mind and spirit, which is passive before it work any manifest effect; and therefore they work most upon weak minds and spirits, as those of women, sick persons, superstitious and fearful persons, children, and young creatures.

‘Nescio quis teneros oculus mihi fascinat agnos:’

The poet speaketh not of sheep, but of lambs. As for the weakness of the power of them upon kings and magistrates, it may be ascribed (besides the main, which is the protection of God over those that execute his place) to the weakness of the imagination of the imaginant; for it is hard for a witch or a sorcerer to put on a belief that they can hurt such persons. Men are to be admonished, on the other side, that they do not easily give place and credit to these operations, because they succeed many times; for the cause of this success is oft to be truly ascribed unto the force of affection and imagination upon the body agent, and then, by a secondary means, it may work upon a divers body, as for example: if a man carry a planet's seal, or a ring, or some part of a beast, believing strongly that it will help him to obtain his love, or to keep him from danger of hurt in fight, or to prevail in a suit, &c., it may make him more active and industrious, and again, more confident and persisting than otherwise he would be. Now, the great effects that may come of industry and perseverance (especially in civil business) who knoweth not? For we see audacity doth almost blind and mate the weaker sort of minds, and the state of human actions is so variable, that to try things oft and never to give over doth wonders; therefore it were a mere fallacy and mistaking to ascribe that to the force of imagination upon another body, which is but the force of imagination upon the proper body: for there is no doubt but that imagination and vehement affection work greatly upon the body of the imaginant, as we shall show in due place.

Men are to be admonished, that as they are not to mistake the causes of these operations, so much less they are to mistake

Y. OF GREAT BRITAIN. THAT THE VICTORY OF THE BATTLE OF WATERLOO, WHICH MAY BE CONSIDERED THE END OF THE REVOLUTIONARY PERIOD OF EUROPEAN HISTORY, WAS TAKEN BY THE ALLIED ARMIES OF THE BATTLE OF WATERLOO.

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the fact or effect, and readily to take that for done which is done. And, therefore, as divers wise judges have prescribed and cautioned, men may not too rashly believe the stories of witches nor yet the evidence against them: for the witches themselves are imaginative, and believe oftentimes they do that which they do not, and people are credulous on that point and ready to impute accidents and natural operations to witchcraft. It is worthy the observing, that both in ancient and late times (as in the Thessalian witches, and the meeting of witches that have been recorded by so many late confessions) the great wonders which they tell of carrying in the air, transforming themselves into other bodies, &c., are still reported to be wrought, not by incantation or ceremonies, but by ointments, and anointing themselves all over. This may justly move a man to think that these fables are the effects of imagination; for it is certain, that ointments do all (if they be laid on anything thick, by stopping of the pores shut in the vapours, and send them to the head extremely; and for the particular ingredients of those magical ointments it is likely they are opiate, and soporiferous, for anointing of the face, head, neck, feet, back-bone, we know is used for procuring dead sleeps: and if any man say that this effect would be better done by inward potions, answer may be made, that the medicines which go to the ointments are so strong, that if they were used inwards they would kill those that use them, and therefore, they work potently, though outwards.

928. The following of the plough hath been approved for refreshing the spirits and procuring appetite; but to use it in ploughing for wheat or rye is not so good, because the earth has spent her sweet breath in vegetables put forth in summer. It is better, therefore, to do it when you sow barley; but, because ploughing is tied to seasons, it is best to take the air of the earth new turned up by digging with the spade, or standing by him that diggeth. Gentlewomen may do themselves much good by kneeling upon a cushion and weeping; and these things yet may practise in the best seasons, which is ever the early spring, before the earth putteth forth the vegetables, and in the sweetest earth you can choose, it would be done also when the dew is a little off the ground, lest the vapour be too moist. I knew a great man that lived long, who had a clean cloud of earth brought to him every morning as he sat in his bed, and he would hold his head over it a good pretty while. I have heard, also, sometimes in digging of new earth, to put

some malmsey, or Greek wine, that the vapour of the earth and wine together may comfort the spirits the more, provided always it be not taken for a heathen sacrifice, or libation to the earth.

934. It is certain that odours do in a small degree nourish, specially the odour of wine; and we see men an hungred do love to smell hot bread. It is related that Democritus, when he lay a dying, heard a woman in the house complain that she should be kept from being at a feast and solemnity (which she much desired to see), because there would be a corpse in the house; whereupon he caused loaves of new bread to be sent for, and opened them and poured a little wine into them, and so kept himself alive with the odour of them till the feast was past. I knew a gentleman that would fast sometimes three or four, yea, five days without meat, bread, or drink; but the same man used to have continually a great whisp of herbs that he smelled on, and, amongst those herbs, some esculent herbs of strong scent, as onions, garlic, leeks, and the like.

937. It were good for men to think of having healthful air in their houses, which will never be if the rooms be low-roofed, or full of windows and doors: for the one maketh the air close and not fresh, and the other maketh it exceeding unequal, which is a great enemy to health; the windows also should not be high up to the roof (which is in use for beauty and magnificence), but low. Also, stone walls are not wholesome, but timber is more wholesome, and especially brick: nay, it hath been used by some with great success to make their walls thick, and to put a lay of chalk between the bricks to take away all dampishness.

939. It is mentioned in some stories, that where children have been exposed or taken away young from their parents, and that afterwards they have approached to their parents' presence, the parents (though they have not known them) have had a secret joy or other alteration thereupon.

940. There was an Egyptian soothsayer that made Antonius believe that his genius (which otherwise was brave and confident) was, in the presence of Octavianus Cæsar, poor and cowardly; and therefore he advised him to absent himself (as much as he could) and remove far from him. The soothsayer was thought to be suborned by Cleopatra, to make him live in Egypt and other remote places from Rome: howsoever he conceit of a predominate or mastering spirit of one man over another, is antient, and received still even in vulgar opinion.

The help therefore is, for a man to work by another, in whom he may create belief, and not by himself, until himself have found by experience that imagination doth prevail; for when experience worketh in himself belief, if the belief that such a thing shall be, be joined with a belief that his imagination may procure it.

For example, I related one time to a man that was curious and vain enough in these things, that I saw a kind of juggler that had a pair of cards, and would tell a man what he thought. This pretended learned man told me it was mistaking in me; for, said he, it was not the knowledge of the man's thought (for that is proper to God), but it was the forcing of a thought upon him, and binding his imagination to a stronger, that he could think no other card. And thereupon he asked me a question or two, which I thought he did not cunningly, knowing before what used to be the feats of the juggler. Sir, said he, do you remember whether he told the man the man thought, himself, or bade another to tell it? I answered (as was true), that he bade another tell it. Whereunto he said, So I thought; for, said he, himself could not have put on so strong an imagination; but by telling the other man (who believed that the juggler was some strange man and could do strange things), that other man caught a strong imagination. I hearkened unto him, thinking for a vanity spake prettily. Then he asked me another question. Saith he, Do you remember whether he bade them all think the card that, and afterwards told the other man in his ear what he could think; or else that he did whisper first in the man's ear what should tell the card, telling that such a man should think such a card, and after bade the man think a card? I told him (as was true) that he did first whisper the man in the ear, that such a man should think such a card; upon this the learned man did much exult, and please himself, saying, Lo, you may see that my opinion is right; for if the man had thought first his thought had been fixed; but the other imagining first, bound his thought. Which though it did somewhat tickle with me, yet I made it lighter than I thought and said; I thought it was confederacy between the juggler and the two servants, though, indeed, I had no reason so to think, for they were both my father's servants, and he had never played in the house before. The juggler also did cause a garter to be held up; and took upon him to know that such an one should point to such a place of the garter, as it should be near so many

ings, yet so much I conceive to be true, that strong imagination hath more force upon things living, or that have been living, than things merely inanimate; and more force likewise upon light and subtle motions than upon motions vehement or ponderous.

958. It is an usual observation, that if the body of one murdered be brought before the murderer, the wounds will bleed afresh. Some do affirm that the dead body, upon the presence of the murderer, hath opened the eyes; and that there have been such like motions, as well where the party murdered hath been strangled or drowned, as where they have been killed by wounds. It may be that this participateth of a miracle, by God's just judgment, who usually bringeth murders to light; but if it be natural, it must be referred to imagination.

960. There be many things that work upon the spirits of man by secret sympathy and antipathy; the virtues of precious stones have been antiently and generally received, and curiously signed to work several effects. So much is true, that stones have in them fine spirits, as appeareth by their splendour; and therefore they may work by consent upon the spirits of men to comfort and exhilarate them. Those that are the best for that effect are the diamond, the emerald, the jacinth oriental, and the gold-stone, which is the yellow topaz. As for their particular properties there is no credit to be given to them: but it is manifest that light, above all things, excelleth in comforting the spirits of men; and it is very probable that light varied doth the same effect with more novelty, and this is one of the causes why precious stones comfort. And therefore it were good to have tinted lanthorns, or tinted screens, of glass coloured into green, blue, carnation, crimson, purple, &c., and to use them with candles in the night; so likewise to have tinted glasses, not only of glass coloured through, but with colours laid between crystals, with handles to hold in one's hand. Prisms are also comfortable things; they have, of various-work, looking-glasses bordered with broad borders of small crystal and great counterfeit precious stones of all colours, that are most glorious and pleasant to behold, especially at the night. The pictures of Indian feathers are likewise comfortable and pleasant to behold; so also fair and clear colours do greatly comfort the eyes and spirits, especially when the sun is not glaring but overcast, or when the moon shineth.

961. There be divers sorts of bracelets fit to comfort the

85. It is a common experience that dogs know the dogger, when as in times of infection some petty fellow is sent to kill the dogs; and that though they have never seen before, yet they will all come forth and bark and fly at
86. The relations touching the force of imagination and secret instincts of nature are so uncertain, as they require great deal of examination ere we conclude upon them, I would have it first thoroughly inquired whether there be any secret passages of sympathy between persons of near blood, as parents, children, brothers, sisters, nurse-children, husbands, wives, &c. There be many reports in history that, upon the death of persons of such nearness, men have had an inward feeling of it. I myself remember, that being in Paris, and my father dying in London, two or three days before my father's death I had a dream, which I told to divers English gentlemen: that my father's house in the country was plastered all over with black mortar. There is an opinion abroad (whether idle or no I cannot say), that loving and kind husbands have a sense of their wives' breeding child by some secret ident in their own body.
87. Next to those that are near in blood there may be the secret passage and instincts of nature between great friends and allies; and sometimes the revealing is unto another person not to the party himself. I remember Philippus Comenius (a grave writer) reporteth, that the archbishop of Vienna (a reverend prelate) said one day after mass, to King Louis the Eleventh of France, "Sir, your mortal enemy is dead." What time Charles Duke of Burgundy was slain at the battle of Granson, against the Switzers. Some trial also should be made whether pact or agreement do anything; as two friends should agree that such a day in every week they, being in far distant places, should pray one for another, or should put on a ring or tablet one for another's sake; whether, if one of them should break their vow and promise, the other should have any feeling of it in absence.
88. If there be any force in imaginations and affections singular persons, it is probable the force is much more in the great imaginations and affections of multitudes: as if a victory should be won or lost in remote parts, whether is there not some feeling thereof in the people whom it concerneth, because of the great joy or grief that many men are possessed with at once? As Quintus, at the very time when that memorable victory

ature of excrescences : as the combs of cocks, the spurs of
 , the horns of beasts, &c. And I would have it tried both
 , both by rubbing those parts with lard or elder, as be-
 and by cutting off some piece of those parts, and laying
 consume, to see whether it will work any effect towards
 onsumption of that part which was once joined with it.

00. The delight which men have in popularity, fame,
 ur, submission and subjection of other men's minds, wills,
 fections (although these things may be desired for other
), seemeth to be a thing in itself, without contemplation
 onsequence, grateful and agreeable to the nature of man.

thing surely is not without some signification, as if all
 ts and souls of men came forth out of one divine limbus ;
 why be men so much affected with that which others
 or say ? The best temper of minds desireth good name
 true honour ; the lighter, popularity and applause ; the
 e depraved, subjection and tyranny, as is seen in great
 uerors and troublers of the world, and yet more in arch-
 tics, for the introducing of new doctrines is likewise an
 tation of tyranny over the understandings and beliefs of

All this seems a strange mixture of knowledge and
 orance, of philosophic insight and childish credulity,
 ight and darkness, to us looking back upon it from
 more advanced station in the ascending road of
 sical discovery. It is truly a wood, as Bacon has him-
 called it, in which he often appears to wander without
 or progress. His conjectures and articles of belief
 now and then make us smile ; but there is after all
 ething very touching in the contemplation of such
 intellect thus groping its way, and staggering and
 bling about, where we walk on a plain road and
 the clear day. It reminds one of the blinded
 son and his pathetic quest :—

A little onward lend thy guiding hand
 To these dark steps, a little further on.

The following passage from Tenison's Introduction to
Baconiana ought not to be here omitted :—“ Whilst
 n speaking of this work of his lordship's of *Natural*
story, there comes to my mind a very memorable re-
 on, reported by him who bare a part in it, the

Reverend Dr. Rawley. One day his lordship was dictating to that Doctor some of the experiments in the *Sylva*. The same day he had sent a friend to court to receive for him a final answer touching the effect of a grant which had been made him by King James. He had hitherto only hope of it, and hope deferred: and he was desirous to know the event of the matter, and be freed, one way or other, from the suspense of his thoughts. His friend, returning, told him plainly that he must thenceforth despair of that grant, how much soever his fortunes needed it. *Be it so*, said his lordship, and then he dismissed his friend very cheerfully, with thankful acknowledgments of his service. His friend being gone, he came straightway to Dr. Rawley, and said thus to him: *Well, Sir! Your business won't go on; let us go on with this, for this is in our power.* And then he dictated to him afresh for some hours without the least hesitancy of speech or discernible interruption of thought."

The *Sylva Sylvarum* was accompanied on its first appearance by a very remarkable piece entitled 'New Atlantis, a Work Unfinished.' This is a philosophic romance, unfortunately only begun, the name being taken from Plato's fiction of the great lost island of the Western Ocean. A Latin translation of the fragment which would seem to have been executed by Bacon himself, was afterwards published by Rawley in his collection of Bacon's Moral and Civil Writings ('*Moralium et Civilium Tomus*'), to. 10, Lon. 1638. The pieces in that volume, as we have already had occasion to remark, are described on the title-page as having been all, with a few exceptions, rendered into Latin by their author. And Rawley in his Life of Bacon expressly mentions the Latin translation of the *New Atlantis* as one of the performances of the last five years of his lordship's life. In an advertisement to the Reader prefixed to the English edition Rawley says:—"This fable my lord devised, to the end that he might exhibit therein a model or description of a college, instituted for the

terpreting of nature and the producing of great and marvellous works for the benefit of men, under the name of Solomon's House, or the College of the Six Days' Works. And even so far his lordship hath proceeded as to finish that part. . . . His lordship thought also in this present fable to have composed a frame of laws, or of the best state or mould of a commonwealth ; but, foreseeing it would be a long work, his desire of collecting the Natural History diverted him, which he preferred many degrees before it." And he adds :—
 " This work of the *New Atlantis*, as much as concerneth the English edition, his lordship designed for this place ; in regard it hath so near affinity, in one part of it, with the preceding *Natural History*."

The *New Atlantis* would be especially interesting were it but as being the only example we have of any attempt made by Bacon in the character of a writer of fiction. But it is besides one of the most brilliant productions of his pen. It has no passion nor any dramatic exhibition of incident or character ; but with a scene so removed from our ordinary humanity nothing of that sort was required or even admissible ; in a copious and easy-flowing vein of invention it does not yield to any other performance of the same kind ; no mere narrative skill of a higher order is to be anywhere found ; and in beauty and expressiveness of language, combined with general abundance of thought, only the highest writers of any kind have equalled or approached it. We will give it with very little abridgment. It commences as follows :—

We sailed from Peru (where we had continued by the space of one whole year) for China and Japan, by the South-Sea, taking with us victuals for twelve months, and had good winds from the east, though soft and weak, for five months' space and more ; but then the wind came about and settled in the west for many days, so as we could make little or no way, and were sometimes in purpose to turn back. But then again there arose strong and great winds from the south, with a point east, which carried us up (for all that we could do) towards the north ; by which time our victuals failed us, though we had

g downwards, and by them a cross : this being delivered, the officer returned, and left only a servant with us to receive answer. Consulting hereupon amongst ourselves we were perplexed ; the denial of landing and hasty warning us troubled us much ; on the other side, to find that the natives had languages and were so full of humanity did comfort us a little ; and above all, the sign of the cross to that intent was to us a great rejoicing, and, as it were, a certain evidence of good. Our answer was in the Spanish tongue : for our ship it was well, for we had rather met with contrary winds than any tempests ; for our sick, there were many and in very ill case, so that if they were not permitted to land they ran in danger of their lives. Our other answer we set down in particular, adding that we had some store of merchandize, which, if it pleased them to deal in, might supply our wants without being chargeable unto them.

We offered some reward in pistols unto the servant, and a piece of crimson velvet to be presented to the officer, but the servant took them not, nor would scarce look upon them, and so left us, and went back in another little boat which was sent for him.

About three hours after we had dispatched our answer there came towards us a person (as it seemed) of place. He had on a gown with wide sleeves, of a kind of water chamolet, of a excellent azure colour, far more glossy than ours ; his under shirt was green, and so was his hat, being in the form of a cap, daintily made, and not so huge as the Turkish turbans, the locks of his hair came down below the brims of it. A noble man was he to behold ; he came in a boat gilt in part of it, with four persons more only in that boat, and followed by another boat wherein were some twenty.

When he was come within a flight-shot of our ship, signs were sent to us that we should send forth some to meet him upon the water, which we presently did in our ship-boat, sending the principal man amongst us save one, and four of our number with him. When we were come within six yards of their boat they called to us to stay, and not to approach further, which we did. And thereupon the man, whom I before described, stood up, and with a loud voice, in Spanish, asked, "Ye Christians?" We answered, we were, fearing the less the sign of the cross we had seen in the subscription ; at which time the said person lift up his right hand towards heaven and drew it softly to his mouth (which is the gesture they use

re were on land he went before us, and turned to us, and said, e was but our servant and our guide. He led us through three air streets, and all the way we went there were gathered some eople on both sides, standing in a row, but in so civil a ashion as if it had been not to wonder at us, but to welcome us; nd divers of them as we passed by them put their arms a ttle abroad, which is their gesture when they bid any wel- come. The strangers' house is a fair and spacious house, built f brick of somewhat a bluer colour than our brick, and with andsome windows, some of glass, some of a kind of cam- ric oiled. He brought us first into a fair parlour above stairs, nd then asked us what number of persons we were, and how any sick. We answered we were in all (sick and whole) one nd fifty persous, whereof our sick were seventeen. He desired s to have patience a little, and to stay till he came back to s, which was about an hour after, and then he led us to see e chambers which were provided for us, being in number ineteen; they having cast it (as it seemeth) that four of those hambers, which were better than the rest, might receive four f the principal men of our company and lodge them alone by emselves, and the other fifteen chambers were to lodge us wo and two together. The chambers were handsome and heerful chambers, and furnished civilly. Then he led us to long gallery, like a dorture, where he showed us all along e one side (for the other side was but wall and window) venteen cells, very neat ones, having partitions of cedar-wood, hich gallery and cells, being in all forty (many more than e needed), were instituted as an infirmary for sick persons; nd he told us withal, that as any of our sick waxed well, he ight be removed from his cell to a chamber: for which pur- ose there were set forth ten spare chambers, besides the num- er we spake of before. This done, he brought us back to the arlour, and lifting up his cane a little (as they do when they ive any charge or command), said to us, "Ye are to know at the custom of the land requireth that, after this day and o-morrow (which we give you for removing your people from our ship), you are to keep within doors for three days: ut let it not trouble you, nor do not think yourselves re- trained, but rather left to your rest and ease. You shall want nothing, and there are six of our people appointed to attend ou for any business you may have abroad." We gave him hanks with all affection and respect, and said, "God surely s manifested in this land." We offered him also twenty pia-

would be done with us when they were expired ; during which time we had every hour joy of the amendment of our sick, who thought themselves cast into some divine pool of healing, they mended so kindly and so fast.

The morrow after our three days were past, there came to us a new man that we had not seen before, clothed in blue as the former was, save that his turban was white, with a small red cross on the top ; he had also a tippet of fine linen. At his coming in he did bend to us a little, and put his arms abroad. We, of our parts, saluted him in a very lowly and submissive manner, as looking that from him we should receive sentence of life or death. He desired to speak with some few of us ; whereupon six of us only stayed, and the rest avoided the room. He said, "I am, by office, governor of this house of strangers, and by vocation I am a Christian priest, and therefore am come to you to offer you my service, both as strangers and chiefly as Christians. Some things I may tell you which I think you will not be unwilling to hear. The state hath given you license to stay on land for the space of six weeks ; and let it not trouble you if your occasions ask further time, for the law in this point is not precise ; and I do not doubt but myself shall be able to obtain for you such further time as shall be convenient. Ye shall also understand that the strangers' house is at this time rich, and much aforehand, for it hath laid up revenue these thirty-seven years : for so long it is since any stranger arrived in this part ; and, therefore, take ye no care, the state will defray you all the time you stay ; neither shall you stay one day less for that. As for any merchandize you have brought, ye shall be well used, and have your return either in merchandize, or in gold and silver, for to us it is all one. And if you have any other request to make, hide it not, for ye shall find we will not make your countenance to fall by the answer ye shall receive. Only this I must tell you, that none of you must go above a karan (that is with them a mile and a half) from the walls of the city without special leave." We answered, after we had looked a while upon one another, admiring this gracious and parent-like usage, that we could not tell what to say, for we wanted words to express our thanks, and his noble free offers left us nothing to ask. It seemed to us that we had before us a picture of our salvation in heaven ; for we that were a while since in the jaws of death, were now brought into a place where we found nothing but consolations. For the commandment laid upon us, we would

“About twenty years after the ascension of our Saviour, it came to pass, that there was seen by the people of Rensusa (a city upon the eastern coast of our island) within night (the night was cloudy and calm), as it might be some mile in the sea, a great pillar of light, not sharp, but in form of a column or cylinder, rising from the sea, a great way up towards heaven; and on the top of it was seen a large cross of light, more bright and resplendent than the body of the pillar: upon which so strange a spectacle the people of the city gathered together upon the sands to wonder; and so after putting themselves into a number of small boats to go nearer to this marvellous sight; but when the boats were come within about twenty yards of the pillar, they found themselves all bound, and could go no further, yet so as they might move to go about, but might not approach nearer; so as the boats stood all as in a theatre, beholding this light as a heavenly sign. It so fell out that there was in one of the boats one of the wise men, of the society of Salomon's House; which House or College, my good brethren, is the very eye of this kingdom, who having awhile entirely and devoutly viewed and contemplated this pillar and cross, fell down upon his face, and then raised himself upon his knees, and lifting up his hands to heaven, made his prayers in this manner:

“ ‘Lord God of Heaven and Earth, thou hast vouchsafed of thy grace, to those of our order, to know thy works of creation and true secrets of them; and to discern (as far as appertaineth to the generations of men) between divine miracles, works of nature, works of art, and impostures and illusions of all sorts. We do here acknowledge and testify before this people that the thing we now see before our eyes is thy finger and a true miracle. And forasmuch as we learn in our books that thou never workest miracles, but to a divine and excellent end (for the laws of nature are thine own laws, and thou exceedest them not but upon good cause), we most humbly beseech thee to prosper this great sign, and to give us the interpretation and meaning of it in mercy, which thou dost in some part secretly promise by sending it unto us.’

“When he had made his prayer, he presently found the boat was in moveable and unbound, whereas all the rest remained still fast; and taking that for an assurance of leave to approach, he caused the boat to be softly and with silence moved towards the pillar; but ere he came near it the pillar and cross of light brake up, and cast itself abroad, as it were in

that there was a matter we were no less desirous to know than
 careful to ask, lest we might presume too far. But encouraged
 by his rare humanity towards us (that could scarce think our-
 selves strangers, being his vowed and professed servants), we
 could take the hardiness to propound it, humbly beseeching
 him, if he thought it not fit to be answered, that he would
 pardon it though he rejected it. We said, we well observed
 those his words, which he formerly spake, that this happy
 land where we now stood was known to few, and yet knew
 most of the nations of the world; which we found to be true,
 considering they had the languages of Europe, and knew much
 of our state and business; and yet we in Europe (notwith-
 standing all the remote discoveries and navigations of this last
 age) never heard any of the least inkling or glimpse of this
 land. This we found wonderful strange; for that all nations
 have interknowledge one of another, either by voyage into
 foreign parts, or by strangers that come to them; and though
 the traveller into a foreign country doth commonly know more
 by the eye than he that stayed at home can by relation of the
 traveller, yet both ways suffice to make a mutual knowledge,
 to some degree, on both parts. But for this island, we never
 heard tell of any ship of theirs that had been seen to arrive
 upon any shore of Europe; no, nor of either the East or West
 Indies, nor yet of any ship of any other part of the world, that
 had made return for them. And yet the marvel rested not in
 this; for the situation of it (as his Lordship said) in the secret
 conclave of such a vast sea might cause it; but then, that they
 should have knowledge of the languages, books, affairs, of
 those that lie such a distance from them, it was a thing we
 could not tell what to make of, for that it seemed to us a con-
 fliction and propriety of divine powers and beings, to be hidden
 and unseen to others, and yet to have others open, and as in a
 light to them. At this speech the Governor gave a gracious
 smile, and said, that we did well to ask pardon for this question
 we now asked; for that it imported, as if we thought this land
 a land of magicians, that sent forth spirits of the air into all
 parts to bring them news and intelligence of other countries.
 It was answered by us all, in all possible humbleness, but yet
 with a countenance taking knowledge, that we knew that he
 spake it but merrily; that we were apt enough to think there
 was somewhat supernatural in this island, but yet rather as
 angelical than magical. But to let his Lordship know truly
 what it was that made us tender and doubtful to ask this ques-

tion, it was not any such conceit, but because we remembered he had given a touch in his former speech, that this land had laws of secrecy touching strangers. To this he said, "You remember it aright, and therefore so that I shall say to you must reserve some particulars, which it is not lawful for me reveal, but there will be enough left to give you satisfaction."

"You shall understand that which perhaps you will scarcely think credible) that about three thousand years ago, or somewhat more the navigation of the world (specially for remote voyages) was greater than at this day. Do not think wrong yourselves that I know not how much it is increased with you within these threescore years; I know it well, and yet I am greater then than now. Whether it was that the example of the ark, that saved the remnant of men from the universal deluge, gave men confidence to adventure upon the waters, what it was, but such is the truth. The Phœnicians, especially the Tyrians, had great fleets; so had the Carthaginians their colony, which is yet further west. Toward the east the shipping of Egypt and of Palestina was likewise great. China also, and the great Atlantis (that you call America) which have now but junks and canoes, abounded then in tall ships. This island (as appeareth by faithful registers of those times) had then fifteen hundred strong ships of great content. Of all this there is with you sparing memory or none, but we have large knowledge thereof.

"At that time this land was known and frequented by tall ships and vessels of all the nations before-named. And (as cometh to pass) they had many times men of other countries that were no sailors, that came with them, as Persians, Chaldeans, Arabians, so as almost all nations of might and fame resorted hither; of whom we have some stirps and little tribes with us at this day. And for our own ships they were sundry voyages, as well to your straits, which you call the Pillars of Hercules, as to other parts in the Atlantic and Mediterranean Seas; as to Pagan (which is the same with Cambalaïne) and Quiney, upon the Oriental Seas, as far as to the borders of the East Tartary.

"At the same time, and an age after or more, the inhabitants of the great Atlantis did flourish; for though the narration and description which is made by a great man with you, that the descendants of Neptune planted there, and of the magnificent temple, palace, city, and hill, and the manifold streams and goodly navigable rivers, which (as so many chains) environed

the same site and temple; and the several degrees of ascent, whereby men did climb up to the same, as if it had been a *cala cœli*, be all poetical and fabulous; yet so much is true, that the said country of Atlantis, as well that of Peru then called Coya, as that of Mexico, then named Tyrambel, were mighty and proud kingdoms in arms, shipping, and riches; so mighty, as at one time (or at least within the space of ten years) they both made two great expeditions; they of Tyrambel through the Atlantic to the Mediterranean Sea; and they of Coya, through the South Sea upon this island: and for the former of these, which was into Europe, the same author amongst you (as it seemeth) had some relation from the Egyptian priest, whom he citeth. For assuredly such a thing there was; but whether it were the antient Athenians that had the glory of the repulse and resistance of those forces, I can say nothing; but certain it is there never came back either ship or man from that voyage. Neither had the other voyage of those of Coya upon us, had better fortune, if they had not met with enemies of greater clemency; for the king of this island (by name Altabiu), a wise man and a great warrior, knowing well both his own strength and that of his enemies, handled the matter so, as he cut off their land-forces from their ships, and entailed both their navy and their camp, with a greater power than theirs, both by sea and land, and compelled them to render themselves without striking stroke; and after they were at his mercy, contenting himself only with their oath, that they should no more bear arms against him, dismissed them all in safety. But the divine revenge overtook not long after those proud enterprises; for within less than the space of one hundred years the Great Atlantis was utterly lost and destroyed; not by a great earthquake, as your man saith (for that whole tract is little subject to earthquakes), but by a particular deluge or inundation, those countries having, at this day, far greater rivers and far higher mountains to pour down waters than any part of the Old World. But it is true that the same inundation was not deep, not past forty foot in most places from the ground; so that although it destroyed man and beasts generally, yet some few wild inhabitants of the wood escaped. Birds also were saved by flying to the high trees and woods; for as for men, although they had buildings in many places higher than the depth of the water; yet that inundation, though it were shallow, had a long continuance, whereby they of the vale that were not drowned perished for

That as a divine instrument, though a mortal man; his name
 was Salomona; and we esteem him as the law-giver of our
 nation. This king had a large heart, inscrutable for good, and
 was wholly bent to make his kingdom and people happy. He
 therefore, taking into consideration how sufficient and substan-
 tive this land was to maintain itself without any aid at all of
 the foreigner, being 5000 miles in circuit, and of rare fertility
 of soil, in the greatest part thereof; and finding also the ship-
 ping of this country might be plentifully set on work, both by
 fishing and by transportations from port to port, and likewise
 by sailing unto some small islands that are not far from us, and
 are under the crown and laws of this state; and recalling into
 his memory the happy and flourishing estate wherein this land
 then was, so as it might be a thousand ways altered to the
 worse, but scarce any one way to the better, thought nothing
 suited to his noble and heroic intentions, but only (as far
 as human foresight might reach), to give perpetuity to that,
 which was in his time so happily established, therefore amongst
 his other fundamental laws of his kingdom, he did ordain the
 interdicts and prohibitions which we have touching entrance of
 strangers, which at that time (though it was after the calamity
 of America) was frequent, doubting novelties and commix-
 ture of manners. It is true the like law, against the admis-
 sion of strangers without licence, is an ancient law in the
 kingdom of China, and yet continued in use; but there it is a
 poor thing, and hath made them a curious, ignorant, fearful,
 foolish nation. But our law-giver made his law of another
 temper; for first, he hath preserved all points of humanity in
 making order and making provision for the relief of strangers
 distressed, whereof you have tasted." At which speech (as
 reason was, we all rose up and bowed ourselves. He went on,
 "That king also still desiring to join humanity and policy
 together, and thinking it against humanity to detain strangers
 here against their wills, and against policy, that they should
 return and discover their knowledge of this estate, he took this
 course. He did ordain, that of the strangers that should be
 permitted to land, as many (at all times) might depart as
 would; but as many as would stay should have very good
 conditions and means to live from the state; wherein he saw so
 far, that now in so many ages since the prohibition, we have
 memory but of one ship that ever returned, and but of thirteen
 persons only, at several times, that chose to return in
 person. What those few that returned may have re-

[illegible][illegible][illegible]

to the honour and dignity of the family of the
the herald readeth aloud; and with that voice
Tirum standeth up, supported by two of his sons,
covert. Then the herald mounteth the high post, and
in the charter into his hand; and with that there is a
tion, by all that are present, in their language
nuch; "Happy are the people of Bensale-
ld taketh into his hand from the oth-
s, which is of gold, both the stall

ever of the work of some of the daughters of the
veiled over at the top with a fine net of silk and
the substance of it is true ivy, whereof, after it is
the friends of the family are desirous to have some
to keep. The Tirsan cometh forth with all his
r lineage, the males before him and the females
m ; and if there be a mother, from whose body the
ge is descended, there is a traverse placed in a loft
right hand of the chair, with a privy door, and a
ow of glass, leaded with gold and blue, where she
is not seen. When the Tirsan is come forth he
in the chair, and all the lineage place themselves
all, both at his back, and upon the return of the
order of their years, without difference of sex, and
their feet. When he is set, the room being always
pany, but well kept and without disorder, after
there cometh in from the lower end of the room a
ich is much as an herald), and on either side of him
ads, whereof one carrieth a scroll of their shining
ment, and the other a cluster of grapes of gold,
foot or stalk. The herald and children are clothed
s of sea-water green satin ; but the herald's mantle
with gold, and hath a train. Then the herald with
ies, or rather inclinations, cometh up as far as the
nd there first taketh into his hand the scroll. This
king's charter, containing gift of revenue, and
eges, exemptions, and points of honour granted to
the family ; and it is ever styled and directed,
in one, our well-beloved Friend and Creditor ;"
tle proper only to this case ; for they say the king
no man, but for propagation of his subjects ; the
e king's charter is the king's image, embossed or
gold ; and though such charters be expedited of
as of right, yet they are varied by discretion ac-
the number and dignity of the family. This
herald readeth aloud ; and while it is read, the
san standeth up, supported by two of his sons, such
th. Then the herald mounteth the half-pace, and
ie charter into his hand ; and with that there is an
, by all that are present, in their language, which
; "Happy are the people of Bensalem." Then
keth into his hand from the other child the cluster
which is of gold, both the stalk and the grapes : but

and virtue (so they be not above two), he calleth for gain, and saith, laying his arm over their shoulders, they g, "Sons, it is well you are born : give God the praise, severe to the end." And withal delivereth to either of jewel, made in the figure of an ear of wheat, which they er wear in the front of their turban or hat. This done l to music and dances and other recreations, after their , for the rest of the day. This is the full order of that

at time six or seven days were spent, I was fallen into : acquaintance with a merchant of that city, whose as Joabin. He was a Jew, and circumcised ; for they me few stirps of Jews yet remaining among them, whom ave to their own religion ; which they may the better do : they are of a far differing disposition from the Jews r parts : for whereas they hate the name of Christ, and secret inbred rancour against the people among whom ve ; these, contrarywise, give unto our Saviour many tributes, and love the nation of Bensalem extremely. this man, of whom I speak, would ever acknowledge rist was born of a virgin, and that he was more than a and he would tell how God made him ruler of the ms which guard his throne ; and they call him also the Way, and the Eliab of the Messiah, and many other ames ; which though they be inferior to his Divine , yet they are far from the language of other Jews. : the country of Bensalem, this man would make no end nending it, being desirous by tradition among the Jews) have it believed that the people thereof were of the ions of Abraham, by another son whom they call au ; and that Moses, by a secret Cabala, ordained the ' Bensalem which they now use ; and that when the i should come, and sit in his throne at Hierusalem, the Bensalem should sit at his feet, whereas other kings keep a great distance. But yet setting aside these dreams, the man was a wise man and learned, and of olicy, and excellently seen in the laws and customs of ion.

afterwards questions the Jew on their laws and s touching marriage ; and, among other things, is at they allow no polygamy, and that " marriage t consent of parents they do not make void, but

like a sheephook, neither of them of metal, but the crosier of balm-wood, the pastoral staff of cedar. Horsemen he had none, neither before nor behind his chariot, as it seemeth, to avoid all tumult and trouble; behind his chariot went all the officers and principals of the companies of the city; he sat alone upon cushions of a kind of excellent plush, blue; and under his foot curious carpets of silk of divers colours, like the Persian, but far finer; he held up his bare hand as he went, as blessing the people, but in silence. The street was wonderfully well kept, so that there was never any army had their men stand in better battle-array than the people stood; the windows likewise were not crowded, but every one stood in them as if they had been placed. When the show was past, the Jew said to me, "I shall not be able to attend you as I would, in regard of some charge the city hath laid upon me for the entertaining of this great person." Three days after, the Jew came to me again, and said, "Ye are happy men: for the father of Salomon's House taketh knowledge of your being here, and commanded me to tell you that he will admit all your company to his presence, and have private conference with one of you that ye shall choose; and for this hath appointed the next day after to-morrow, and because he meaneth to give you his blessing he hath appointed it in the forenoon." We came at our day and hour, and I was chosen by my fellows for the private access. We found him in a fair chamber richly hanged, and carpeted under foot, without any degrees to the state; he was set upon a low throne richly adorned, and a rich cloth of state over his head, of blue satin embroidered. He was alone, save that he had two pages of honour, on either hand one, finely attired in white. His under-garments were the like that we saw him wear in the chariot, but instead of his gown he had on him a mantle with a cape, of the same fine black, fastened about him. When we came in, as we were taught, we bowed low at our first entrance; and when we were come near his chair he stood up, holding forth his hand ungloved and in posture of blessing; and we every one of us stooped down and kissed the hem of his tippet; that done, the rest departed, and I remained.

The Father, then, having warned the pages forth of the room, and caused his visitor to sit down beside him, gives him the following account of Solomon's House:—

The end of our foundation is the knowledge of causes and

upon the shore, for some works wherein is required the air and vapour of the sea; we have likewise violent streams and cataracts, which serve us for many motions: and likewise engines for multiplying and enforcing of winds, to set also on going divers motions.

We have also a number of artificial wells and fountains made in imitation of the natural sources and baths: as tinctured upon vitriol, sulphur, steel, brass, lead, nitre, and other minerals. And again, we have little wells for infusions of many things, where the waters take the virtue quicker and better than in vessels or basins; and amongst them we have a water which we call Water of Paradise: being, by that we drink it, made very sovereign for health and prolongation of life.

We have also great and spacious houses where we imitate and demonstrate meteors: as snow, hail, rain, some artificial rains of bodies, and not of water, thunders, lightnings; also generations of bodies in air, as frogs, flies, and divers others.

We have also certain chambers, which we call Chambers of Health, where we qualify the air as we think good and proper for the cure of divers diseases and preservation of health.

We have also fair and large baths, of several mixtures, for the cure of diseases and the restoring of man's body from affliction; and other for the confirming of it in strength of sinews, vital parts, and the very juice and substance of the body.

We have also large and various orchards and gardens wherein we do not so much respect beauty as variety of ground and soil, proper for divers trees and herbs; and some very spacious, where trees and berries are set, whereof we make divers kinds of drinks, besides the vineyards. In these we practise likewise all conclusions of grafting and inoculating as well of wild trees as fruit-trees, which produceth many effects; and we make by art in the same orchards and gardens trees and flowers to come earlier or later than their seasons, and to come up and bear more speedily than by their natural course they do; we make them also, by art, greater much than their nature, and their fruit greater and sweeter and of differing taste, smell, colour, and figure from the nature; and many of them we so order that they become of medicinal use.

We have also means to make divers plants rise by mixture of earths without seeds; and likewise to make divers new plants, differing from the vulgar; and to make one tree or plant turn into another.

fast long after, and some other that used make the very flesh of men's bodies sensibly more hard and tough, and their strength far greater than otherwise it would be. . . .

We have also divers mechanical arts, which you have not, and stuffs made by them, as papers, linen, silks, tissues, dainty works of feathers of wonderful lustre, excellent dyes, and many others, and shops likewise, as well for such as are not brought into vulgar use amongst us, as for those that are. . . .

We have also perspective-houses, where we make demonstrations of all lights and radiations, and of all colours; and out of things uncoloured and transparent we can represent unto you all several colours not in rainbows (as it is in gems and prisms), but of themselves single. We represent also all multiplications of light, which we carry to great distance and make so sharp as to discern small points and lines; also all colourations of light, all delusions and deceits of the sight, in figures, magnitudes, motions, colours, all demonstrations of shadows. We find also divers means yet unknown to you of producing of light originally from divers bodies. We procure means of seeing objects afar off, as in the heaven and remote places, and represent things near as afar off, and things afar off as near, making feigned distances. We have also helps for the sight far above spectacles and glasses in use; we have also glasses and means to see small and minute bodies perfectly and distinctly, as the shapes and colours of small flies and worms, grains, and flaws in gems which cannot otherwise be seen. . . . We make artificial rainbows, halos, and circles about light; we represent also all manner of reflections, refractions, and multiplication of visual beams of objects.

We have also precious stones of all kinds, many of them of great beauty, and to you unknown; crystals likewise, and glasses of divers kinds, and amongst them some of metals vitrified, and other materials beside those of which you make glass; also a number of fossils and imperfect minerals which you have not; likewise loadstones of prodigious virtue, and other rare stones, both natural and artificial.

We have also sound-houses, where we practise and demonstrate all sounds and their generation. We have harmonics which you have not, of quarter sounds and lesser slides of sounds. Diverse instruments of music likewise to you unknown, some sweeter than any you have, with bells and rings that are dainty and sweet. We represent small sounds as great and deep; likewise great sounds extenuate and sharp

THIRD PART OF THE INSTAURATION :— ATLANTIS. 137

We have also houses of deceits of the senses, where we represent all manner of feats of juggling, false apparitions, impostures, and illusions, and their fallacies; and surely you will easily believe that we that have so many things truly natural, which induce admiration, could in a world of particulars deceive the senses, if we would disguise those things and labour to make them more miraculous. But we do hate all impostures and lies, inasmuch as we have severely forbidden to all our fellows, under pain of ignominy and fines, that they do not show any natural work or thing adorned or swelling, but only pure as it is, and without all affectation or strangeness.

These are, my son, the riches of Salomon's house.

For the several employments and offices of our fellows we have twelve that sail into foreign countries under the names of other nations (for our own we conceal), who bring us the books, and abstracts, and patterns of experiments of all other arts. These we call merchants of light.

We have three that collect the experiments which are in all books. These we call depredators.

We have three that collect the experiments of all mechanical arts, and also of liberal sciences, and also of practices which are not brought into arts. These we call mystery-men.

We have three that try new experiments.

Such as themselves think good. These we call pioneers or miners.

We have three that draw the experiments of the former form into titles and tables, to give the better light for the drawing of observations and axioms out of them. These we call compilers.

We have three that bend themselves, looking into the experiments of their fellows, and cast about how to draw out of them things of use and practice for man's life and knowledge, as well for works as for plain demonstration of causes, means of natural civilities, and the easy and clear discovery of the virtues and parts of bodies. These we call downy-men, or benefactors.

Then after diverse meetings and consults of our whole number, to consider of the former labours and collections, we have three that take care, out of them, to direct new experiments of a higher light, more penetrating into nature than the former. These we call lamps.

We have three others that do execute the experiment, directed, and report them. These we call inoculators.

Lastly, we have three that raise the former discoveries by experiments into greater observations, axioms, and aphorisms. These we call interpreters of nature.

We have also as you must think, novices and apprentices that the succession of the former employed men do not fail; besides a great number of servants and attendants, men, and women. And thus we do also; we have consultations, which of the inventions and experiences which we have discovered shall be published, and which not, and take all an oath of secrecy for the concealing of those which we think meet to keep secret, though some of those we do reveal sometimes to the state, and some not.

For our ordinances and rites we have two very long and fair galleries; in one of these we place patterns and samples of all manner of the more rare and excellent inventions; in the other we place the statues of all principal inventors. Thus we have the statue of your Columbus, that discovered the West Indies; also the inventor of ships; your monk that was the inventor of ordnance and of gunpowder; the inventor of music; the inventor of letters; the inventor of printing; the inventor of observations of astronomy, the inventor of work in metal; the inventor of glass, the inventor of silk of the worm; the inventor of wine; the inventor of corn and bread; the inventor of sugars; and all these by more certain traditions than you have. Then we have divers inventors of our own of excellent works, which, since you have not seen, it were too long to make descriptions of them, and, besides, in the right understanding of those descriptions you might easily err: for upon every invention of value we erect a statue to the inventor, and give him a liberal and honourable reward. These statues are, some of brass, some of marble and touchstone, some of cedar, and other special woods, gilt and adorned, some of iron, some of silver, some of gold.

We have certain hymns and services, which we say daily of laud and thanks to God for his marvellous works, and forms of prayers, imploring his aid and blessing for the illumination of our labours, the end turning them into good and holy uses.

Lastly, we have circuits or visits of divers principal cities of the kingdom, where, as it cometh to pass, we do publish such new profitable inventions as we think good; and we do declare natural divinations of diseases, plagues, swarms

hurtful creatures, scarcity, tempest, earthquakes, great inundations, comets, temperature of the year, and divers other things; and we give counsel thereupon what the people shall do for the prevention and remedy of them.

And when he had said this, he stood up, and I, as I had been taught, knelt down, and he laid his right hand upon my head and said, "God bless thee, my son, and God bless this relation which I have made. I give thee leave to publish it for the good of other nations; for we here are in God's bosom, a land unknown." And so he left me, having assigned a value of about two thousand ducats for a bounty to me and my fellows; for they give great largesses where they come upon all occasions.

To this Third Part of the *Instauratio* are also to be referred certain other papers first published by Tenison in that division of the *Baconiana* (1679) entitled *Physiological Remains*. Of these a mere enumeration will be sufficient. The first, an imperfect tract in English entitled 'Inquisitions touching the Compounding of Metals,' is different from the portion relating to the same subject of the 'Articles respecting Metals' already noticed. The others are, 'Certain Experiments made by the Lord Bacon about Weight in Air and Water;'—'Certain Sudden Thoughts of the Lord Bacon's, set down by him under the title of *Experiments for Profit*;'—'Certain Experiments of the Lord Bacon's about the Commixture of Liquors only, not Solids, without heat or agitation, but only by simple composition and settling;'—'A Catalogue of Bodies attractive and not attractive, made by the Lord Bacon, together with experimental observations about Attraction;' partly in Latin, and given also in English by Tenison. Along with these may be placed a collection in English of facts respecting Heat and Cold, first published in Stephens's Second Collection, *Letters and Remains*, 4to. Lon. 1734, under the title of 'Sequela Churtarum: sive, Inquisitio Legitima de Calore et Frigore.' Then there are the *Medical Remains* published in the *Baconiana*;—consisting of a receipt styled by Bacon 'Grains of Youth;' various other ointments, preservatives, restorative drinks, &c.; a receipt

closes in the old editions with an enumeration of what are designated 'Magnalia Naturæ, præcipuè quoad usus humanos' (The great Things of Nature, more especially so far as regards the needs of Man). These *Magnalia* include the Prolongation of Life, the Restitution of Youth in some degree, the Retardation of Age, the Curing of Diseases counted Incurable, the Mitigation of Pain, the Increasing of Strength and Activity and of Ability to suffer Pain or Torture, the Altering of Complexions, of Fatness and Leanness of Statures, and of Colours, the Increasing and Exalting of the Intellectual Faculties, the Version (or Conversion) of Bodies into other Bodies, the Making of new Species, Instruments of Destruction as of War and Poison, Exhilaration of the Spirit, Force of the Imagination either upon another body or upon the body itself, Acceleration of Time in Maturations and Classifications, the Acceleration of Putrefaction, Germination, and Germination, the Raising of Tempests, New Foods, New Threads for Apparel and New Stuffs, Natural Divinations, Deceptions of the Senses, Greater Measures of the Senses, Artificial Minerals and Cements.

Of the FOURTH PART of the *Instauratio Magna*, all that appears to have been executed is a short Preface or Introduction printed by Gruter among the *Impetus Philosophici* with the titles of 'Scala Intellectus, sive Filum Labyrinthi' (The Ladder of the Understanding, or the Thread of the Labyrinth). The second of these two titles, it may be remembered, is the same that Gruter also gave to an Inquiry respecting Motion, noticed above, which he has printed in another part of his edition, and which has been assigned by the modern editors to the Third Part of the *Instauration*. The *Scala Intellectus* is the title given by Bacon himself to the Fourth Part of his great work in the *Distributio*, or Division, published along with the *Novum Organum*.* In that discourse he describes this Fourth Part as in fact nothing else than a particular and expanded application of the Second Part.† The Preface published by Gruter

See the present work, Vol. II. p. 25. † Ibid. p. 31.

manner as we judge to have the exactest correspondence with truth; and therefore deliver as a manner chosen and approved.

We do not, however, after the common custom of men, propose our own forms and methods of inquiry, as if they were inviolable, the only ones and perfect in all their parts, so as to make it absolutely necessary to use them; for we would by no means cramp or confine the industry and felicity of mankind. There is no doubt but men of genius and leisure, either of themselves or as being now freed from the difficulties which necessarily attend the first breaking up of the ice of experience, may carry our method to greater perfection; and it is our earnest desire that the true art of conducting inquiries should improve.

From what is said here and in the *Distributio* Shaw appears to have inferred, that the examples of investigation and discovery according to his new system, which Bacon intended to give in the Fourth Part of the *Instauration*, were no other than those which he published under the titles of his Histories of the Winds, of Life and Death, &c. And these treatises are accordingly placed by Shaw in the Fourth Part. But this is to go directly in the face of Bacon's own title-pages, which expressly declare all these Histories to belong to the Third Part of the *Instauration*.

In the *Distributio* Bacon has himself entitled the FIFTH PART of the *Instauration* 'Prodromi sive Anticipationes Philosophiæ Secundæ;'* and among the *Impetus Philosophici* published by Gruter is a short paper bearing that title, and further designated 'Præfatio' (The Preface). The following is the greater part of it, as translated by Shaw:—

Though in our own opinion we lay better things before mankind than either the ancient or those at present received, yet we are far from lessening these latter in the public esteem; but desire that even these should be improved, enlarged, and enriched as they deserve. For it is no part of our intention to read all men totally, or any of them immediately, away from the things at present authorized and believed. But as an arrow in shooting whirls round its axis all the time of its progressive motion, and thus helps itself forwards, so whilst we

* See Vol. II. p. 25.

to our own doctrines and opinions which we refuse to abide by the things we shall here declare, what may prove; and this purely to reserve everything entire, for our secondary, inductive, and more perfect

work proper, in the work itself, to deliver our thoughts free, without binding them up into method, because best suits the young sciences that are but just sprouting from their roots; and has no tendency to build up an cementing of things together, but leaves, as it ought sent, every subject unlimited and open to further

will remain several pieces in Latin among those by Gruter, and also one or two fragments in which may be considered as belonging to the *io*, but to which Part it would be difficult to ascribe, the first editor of Bacon's collected works, the only one of all his editors who seems even to have read them, has assigned the Latin pieces to the first part of the *Instauratio*; others appear to have chosen to regard them as more properly belonging to the second; but perhaps the safest plan is to place all the various disquisitions by themselves, as an Appendix to the author's great work. Some of them may be considered as the original draughts, or as earlier forms, of the *Instauration* which we have already mentioned. It is assumed on all hands that the Sixth Part of the *Instauration* was never even begun by Bacon.

The first tract in Gruter's collection is entitled 'Cogitata de Interpretatione Naturæ, sive de Inventionum et Operum' (Things Thought and Seen of the Interpretation of Nature, or the Discoveries and Effects). It fills 61 pages of his little 'Two Letters of Bacon's relating to the 'Cogitata' are printed in the First Part of the *Resus*. In the first, addressed to Bishop Andrews, he writes 'I hasten not to publish; perishing I would This hath put me into these Miscellanea which I purpose to suppress if God give me leave

vised year by year, one after another, and
 ered and amended in the frame thereof, till
 e to that model in which it was committed
 ' There is not perhaps a thought in the
 Visa' which is not to be found in some part
ratio; still it does not deserve to be called,
 as has been, merely a rough draught of that
 ot at all a rough or unfinished composition,
 remarkable degree polished, eloquent, and
 has never been translated into English, as
 aware; but there is a fragment in English,
 um *Labyrinthi*, sive *Formula Inquisitionis*;
 ars Prima' (The Thread of the Labyrinth,
 Inquiry; To his Sons; Part First), origi-
 ed in Stephens's Second Collection (1734),
 bonds generally, and for the most part very
 the commencing portion of it. This, it will
 is the third *Filum Labyrinthi* we have had
 ; the title seems to have been used by
 ignate any exposition of his peculiar views
 philosophy. As for the inscription *Ad*
 s Sons) here, it must apparently be under-
 a To his Disciples or Followers. We will
 greater part of this English *Filum Laby-*

Bacon thought in this manner. The knowledge
 world is now possessed, especially that of nature,
 to magnitude and certainty of works. The
 ounceth many diseases incurable, and saileth
 , the alchemists wax old and die in hopes; the
 orm nothing that is permanent and profitable;
 take small light from natural philosophy, and
 their own little threads. Chance sometimes
 entions, but that worketh not in years but ages;
 that the inventions known are very imperfect;
 re not like to be brought to light, but in great
 ; and that those which are, came not to light by

ht, also, that knowledge is uttered to men in a
 y thing were finished; for it is reduced into arts
 which, in their divisions, do seem to include all
 and how weakly soever the parts are filled, yet

upon divinity. And before-time, likewise, the greatest of the studies of philosophers was consumed in moral philosophy, which was as the heathen divinity. And in both a great part of the best wits betook themselves to law, arms, and causes of estate, specially in the time of the excess of the Romans, who, by reason of their large empire, lent the service of all their able men for civil business. The time amongst the Grecians, in which natural philosophy seemed most to flourish, was but a short space ; and that, rather abused in differing sects and conflicts of opinions profitably spent. Since which time natural philosophy never any profession, nor never possessed any whole man, nor, perchance, some monk in a cloister, or some gentleman in country, and that very rarely, but became a science of use to season a little young and unripe wits, and to serve as introduction to other arts, especially physic and the practical mathematics ; so as he saw plainly, that natural philosophy hath been intended by few persons, and in them hath occupied the least part of their time, and that in the weakest age and judgment.

He thought, also, how great opposition and prejudice natural philosophy had received by superstition, and the immoderate and blind zeal of religion ; for he found that some of the Grecians which first gave the reason of thunder had been condemned of impiety ; and that the cosmographers which discovered and described the roundness of the earth, and the consequence thereof touching the antipodes, were not much otherwise censured by the ancient fathers of the Christian church ; and that the case is now much worse, in regard of the excess of the schoolmen, and their dependencies in the universities, who, having made divinity into an art, have not incorporated the contentious philosophy of Aristotle into the body of Christian religion ; and, generally, he perceived in men of devout simplicity this opinion : that the secrets of nature were the secrets of God, and part of that whereunto the mind of man, if it seek to press, shall be rewarded ; and that the desire in men to attain to so great and noble a knowledge hath a resemblance with that temptation which caused the original fall ; and on the other side, in men of levour policy he noted an inclination to have the people directed upon God the more when they are less acquainted with the causes, and to have no stirring in philosophy lest it should lead to an innovation in divinity, or else should dis-

and lastly, in our times, and the ages of our fathers, when Luther and the divines of the Protestant church on the one side, and the Jesuits on the other, have enterprized to reform, the one the doctrine, the other the discipline and manners of the Church of Rome, he saw how well both of them have awakened to their great honour and succour all human learning. And for reason, there cannot be a greater and more evident than this. that all knowledge, and especially that of natural philosophy, tendeth highly to the magnifying of the glory of God in his power, providence, and benefits appearing and engraven in his works, which, without this knowledge, are beheld but as through a veil; for if the heavens, in the body of them, do declare the glory of God to the eye, much more do they, in the rule and decrees of them, declare it to the understanding. And another reason, not inferior to this is, that the same natural philosophy principally amongst all other human knowledge, doth give an excellent defence against both extremes of religion, superstition, and infidelity: for both it freeth the mind from a number of weak fancies and imaginations, and it raiseth the mind to acknowledge that to God all things are possible; for so that purpose speaketh our Saviour in that first canon against heresies, delivered upon the case of the resurrection: "You err, not knowing the Scriptures, nor the power of God;" teaching that there are but two fountains of heresy: not knowing the will of God revealed in the Scriptures, and not knowing the power of God revealed, or at least made most sensible, in his creatures. So, as he saw well, that natural philosophy was of excellent use to the exaltation of the Divine Majesty; and that which is admirable, that being a remedy of superstition, it is nevertheless a help to faith. He saw, likewise, that the former opinions to the prejudice hereof, had no true ground, but must spring either out of mere ignorance or out of an excess of devotion, to have divinity all in all; whereas, it should be only above all; both which states of mind may be best pardoned, or else out of worse causes, namely out of envy, which is proud weakness and deserveth to be despised: or out of some mixture of imposture to tell a lie for God's cause; or out of an impious diffidence as if men should fear to discover some things in nature which might subvert faith. But still he saw well, howsoever these opinions are in right reason reproved, yet they leave yet to be not intellectual hinderances to natural philosophy and invention.

8. He thought also, that there wanted not great contrari-

saw well that both in the state of religion, and in the administration of learning, and in common opinion, there were many and continual stops and traverses to the course of invention.

9. He thought, also, that the invention of works and further possibility was prejudiced in a more special manner than that of speculative truth; for, besides the impediments common to both, it hath, by itself, been notably hurt and discredited by the vain promises and pretences of alchemy, magic, astrology, and such other arts, which, as they now pass, hold much more of imagination and belief than of sense and demonstration. But to use the poet's language: men ought to have remembered, that although Ixion, of a cloud in the likeness of Juno, begat centaurs and chimeras, yet Jupiter, also, of the rue Juno, begat Vulcan and Hebe. Neither is it just to deny credit to the greatness of the acts of Alexander, because the like, or more strange have been feigned of an Amades or an Arthur, or other fabulous worthies. But though this in true reason should be, and that men ought not to make a confusion of unbelief; yet he saw well it could not otherwise be in event, but that experience of untruth had made access to truth more difficult, and that the ignominy of vanity hath abated all greatness of mind.

10. He thought, also, there was found in the mind of man an affection naturally bred and fortified, and farthered by discourse and doctrine, which did pervert the true proceeding towards active and operative knowledge. This was a false estimation, that it should be as a diminution to the mind of man to be much conversant in experiences and particulars, subject to sense and bound in matter, and which are laborious to search, ignoble to meditate, harsh to deliver, illiberal to practise, infinite as is supposed in number, and no ways accommodate to the glory of arts. This opinion, or state of mind, received much credit and strength by the school of Plato, who, thinking that particulars rather revived the notions and excited the faculties of the mind than merely informed; and having mingled his philosophy with superstition, which never favoureth the sense, extolleth too much the understanding of man in the inward light thereof. And again, Aristotle's school, which giveth the due to the sense in assertion, denieth it in practice much more than that of Plato. For we see the schoolmen, Aristotle's successors, which were utterly ignorant of history, rested only upon agitation of wit: whereas Plato giveth good example of inquiry by induction and view of par-

at undertaking to determine anything in a subject that lies so remote from direct experiment." Bacon himself proposes three things: first, to propound certain philosophical questions relating to the facts of Astronomy; secondly, to show distinctly wherein the History of the Heavens consists, and to lay down certain heads of induction, or Articles of Inquiry, concerning the Celestial Bodies; thirdly, to give directions how the things sought for should be considered when obtained, how they should be exhibited, and how recorded. The treatise, as we have it, however, embraces only the first of these three divisions. It is curious as a record, not of the state of astronomical science in Bacon's day, but of his own knowledge and notions on the subject, and it is interspersed with some ingenious observations, but for the purpose of the present review it may be dismissed without further examination.

To the same Fourth Chapter of the Third Book of the *De Augmentis* Tenison would reduce the next piece in Gruter's volume, which extends from p. 154 to p. 177, and is entitled 'Thema Coch' (A Thesis or System of the Heaven). It may be regarded as a sequel to the preceding speculation, and is curious as giving us the conclusions upon several of the points there inquired about, which Bacon was disposed to adopt for the present, or, as he states, till his facts and inductions should be more matured. Among other things, he conceives that from the earth up to the highest point of the heaven there are three general regions, or as it were stories or floors, in respect of flame: the region in which flame is extinguished, that in which it is combined with air, and that in which it exists in a state of dispersion. He rejects the vulgar opinion that flame is merely air set on fire; affirming that air and flame are two clearly heterogeneous bodies or substances, like water and oil, sulphur and mercury. The moon, he maintains, is neither a fluid nor a solid body, but a mass of flame, without flow and languid kind, being in fact the first sediment at the same time the last sediment of celestial flame. The stars, he affirms, are true

after that comes a long disquisition (filling from p. 208 to p. 285) entitled 'De Principiis atque Originibus, secundum Fabulas Cupidinis et Coeli; sive, Parmenidis et Telesii, et praecipue Democriti, Philosophia tractata in Fabula de Cupidine' (On the Originating Principles of the Universe according to the Fables of Cupid and Coelus; or, The Philosophy of Parmenides and Telesius, and especially of Democritus, as developed in the Mythological Fable of Cupid). This has been translated by Shaw under the title of 'An Essay towards a scientific History of Natural Philosophy from the Primitive Times to the Present: deduced by way of explanation upon the Ancient Fable of Cupid.' He makes it a portion of the Fifth Part of the *Instauration*. In Blackbourne's arrangement it stands in the 'Third Part. Tenison considers it as properly belonging to the *Distributio*, or Plan, of the *Instauration*. It may be regarded as connected with the treatise *De Sapientia Veterum*,* in which we have also two short chapters (the 12th and 17th) on the fables of 'Coelus, or the Origins,' and of 'Cupid, or the Doctrine of Atoms.' It seems, in fact, to have been designed for an extension of or supplement to these two chapters; but it is only a fragment, and it breaks off before the fable of Coelus has been taken up, or the philosophical systems of Parmenides and Telesius more than entered upon. Telesius, or Bernardino Telesio, was an Italian, who opposed the Aristotelian doctrines, and promulgated his own views of the origin of things, in a work first published at Rome in 1565, with the title of 'De Rerum Natura juxta Propria Principia.' His system was that the productive principles of all things were Cold and Heat, which is said to have been also the doctrine of the Eleatic philosopher Parmenides, who lived five centuries before the commencement of our era.

Gruter's next piece, being the first of those designated *Impetus Philosophici*, is entitled 'Indicia Vera de Interpretatione Naturae' (True Indications respecting

* See our First Volume, pp. 91-112.

tenth, 'On the Office of the Interpreter;' the ninth and twelfth, 'On the Anticipation (*provisu*) things.' In the two last the discourse assumes the form of an address by the author to a son or disciple (*filii*); and there is tacked to it a further discourse in the same form, entitled in Gruter 'Tradendi Modus timus' ('The Legitimate Mode of Handing down the sciences'), but in Stephens's Second Collection, where a copy of it is also printed from another original copy, *Temporis Partus Maximus, sive De Interpretatione Naturae Lib. 3* ('The Greatest Birth of Time, or the third Book of the Interpretation of Nature'). The latter part of this Latin piece has been translated by Stephens, under the title of 'A Short Scientifical Critique of the Works of the more Eminent Philosophers, Ancient and Modern:' and the following Specimen is transcribed from his version:—

It is plainly perceive that the sciences will not be considerably advanced till men shall be once made thoroughly acquainted with the proper characters and merits of those ancient and modern philosophers they so much admire. The great design is, therefore, to deal roundly, and fix a mark on such pretended philosophers as we take to have been more pernicious than the poets: debauchers of men's minds, and falsifiers of the works of nature, and to make, at least, as free from that degenerate servile tribe, their followers, flatterers, and hirelings who corrupt mankind for gain. And we shall have the liberty to cite each of them by name, lest, as their authority is so great, we should be apprehended only to act against them and under colour side with some or other of them, since we cherish such violent disputes and animosities among ourselves.

Let Aristotle first appear, whom we charge 1. with abominable sophistry; 2. useless subtilty; and 3. a vile sporting with words. Nay, when men by any accident, as by a favourable gale, arrived at any truth, and there cast anchor, this had the assurance to fetter the mind with the heaviest chains; and, composing a certain art of madness, enslaved the mind with words.

Again, from the nursing and tutoring of this man have arisen a shoal of cunning triflers, who, turning their backs

under the name of contemplation, to tumble over its own blind and confused idols: then it was he committed the capital crime of which we accuse him; and no less impiously has he introduced the canonization of folly, and had the assurance to screen his degenerate and corrupt notions under the cloak of religion; and here lies the strength of the charge. But for his being the father of philology, polite literature, and elegant writing, who, by his example, authority, and success, captivated, persuaded, and led numbers to content themselves with character for wit, politeness, agreeableness, and a popular knowledge of things, to the detriment and corruption of a severe and rigorous inquiry after truth; we account this a less heinous offence; and among the men thus captivated by him, we reckon Cicero, Seneca, and Plutarch, with numerous others not so comparable to them.

Let us next proceed to the physicians, and first summon them to appear, whom we implead—1. As a man of a very narrow mind; 2. A deserter of experience; and 3. An idle villager. This is the man that would screen the ignorance and sloth of physicians from their deserved reproach, and preserve them unattacked; whilst himself most feebly and unusually pretends to perfect their art and fill up their office. This is the man that, like the raging dog-star, or the plague, votes mankind to death and destruction by pronouncing such tribes of diseases incurable, taking away all glimmering hope, and leaving no room for future industry. This is the man who makes his own fiction of mixture to be nature's sole prerogative. This is the man that is everywhere fond of showing; and boasting the sedition, strife, and disagreement betwixt celestial heat and that of fire: and upon this and all other casious maliciously curbs the human power, and endeavours surround and protect ignorance with eternal despair. It is owing to this man's unworthiness that we dwell no longer on his charge; let him then be dismissed, and take along with him his whole train of associates; those dispensatory-compilers from the Arabians, who have shown such folly in their theories, and from their supine and jejune conjectures massed together such heaps of promises, instead of real helps, in vulgar remedies. And let the rear be brought up with that superficial tribe of modern doctors whose names are not worth the mentioning.

We must, however, make some difference in this tribe of *doctors*: the worst and most absurd sort whereof are those who

have pent the whole art into strict methods and narrow systems, which men commonly cry up for the sake of their regularity and style. and such a kind of author is Fernelius. But they are less prejudicial to the art and to mankind, who deliver a large stock and variety of observations, experiments, and particular cases, even though they pollute and obscure them with their absurd and foolish reasons, idle hypotheses, and solutions like Arnoldus de Villa Nova and others of the same stamp.

On the opposite side stand the tribe of chemists, with Paracelsus at their head, who, for his malice, deserves to be separately chastised as a flagrant example: for those accused above are only falsifiers and pretenders, but this man is throughout a monster. What Bacchanalian oracles are those he utters in meteorology, whilst he is ridiculously aping of Epicurus? All that Epicurus offers upon the subject is but drowsy opinion which he unconcernedly left to its fate; but Paracelsus blunder than fate and more rash than chance, is ready to avouch the absurdest falsehoods. What dreams of resemblances, correspondences, and parallels of the productions of his elements, are given us by this fanatical linker-together of idols? His three principles, indeed, might be received with some utility, as laying a foundation in nature: but he is continually wresting them to every thing according to his greed, dexterity in delusion and imposture. But these are not the worst of his crimes; for, besides all this, he, like a sacrilegious impostor, has mixed and polluted divine things with natural, sacred with profane, fables with heresies, and human truths with religions; so as, not, like the ancient sophists, to have hid, but utterly extinguished that sacred thing he has so frequently in his impious mouth, the light of nature. The sophists were only deserters of experience, but Paracelsus has betrayed it: and subjecting the crude and personated evidence of things to rules of contemplation, and deriving the various alterations of substances from imaginary motions, he has thus endeavoured to corrupt the fountains of science and to throne the human mind. At the same time, so far is he from understanding or justly representing experience, that he has added to the trouble and tediousness in experimenting, of which the sophists complain, and to which the empirics are unequal. In short, he has every where to the utmost magnified the absurd pretences of magicians, countenanced such extravagancies, and encouraged others to believe them from his own assertions; being thus at once the work and servant of impostures.

It is great pity he should ever have found such an abettor and apologist as Severinus, whose abilities might have been much better employed than upon the fooleries of that man. It is Severinus who has modulated the brayings of that ass, and by his own skill in music played them sweetly off in a variety of tunes, and thus converted shocking and monstrous fictions and falsehoods into pleasing and delightful fables. This author, indeed, is the more excusable, in that being of the doctrine of the sophists, which is not only barren of works but professedly tends to introduce despair, he went in quest of firmer foundations in this general decay of philosophy and arts. And thus, when the works of Paracelsus offered themselves and came recommended with pompous show, the subterfuge of obscurity, affinity with religion, and other impostures, Severinus gave into them, delivered not the real fountains of things, but only threw out promises and hopes with somewhat of warmth and indignation; whereas, would he have acted as he ought, he should have left the determinations and maxims of wit and genius, and gone over to the real doctrines and precepts of nature, which alone is the way to shorten arts and lengthen life.

This charge we have brought against Paracelsus seems to astonish the rest of the chemists, who greedily swallow those decrees and points of doctrine which he has rather promulgated and promised, than actually laid down or made good, and defended them with arrogance instead of caution. His whole tribe of followers appear linked to one another by the lying spirit that shows itself in their sworn hopes and promises which they are constantly boasting. However, by wandering through the wilds of experience they sometimes stumble upon certain useful discoveries, not by reason but by accident: whence, proceeding to form theories, they plainly carry the smoke and tarnish of their art along with them. For as that simple youth, who, finding a stick upon the shore, would needs convert it into a ship, so these childish operators at the furnace must needs be raising philosophy from a few experiments of distillation, and introducing, at every turn, their own idols of separation and analysis where no traces of them are really found.

Yet we do not accuse them all in the lump, but make a difference between that little serviceable set who, being not very solicitous about raising of theories, principally practise *certain mechanical subtilty* in searching out and laying ho

terpretatione Naturae Prooemium' (A Preface reflecting the Interpretation of Nature). This Teriscnould connect with the existing Preface to the *Instauratione*.* And it may have been written with the intention of introducing either that work as a whole, or the portion of it designated the *Novum Organum*. It is, however, peculiarly interesting and remarkable for the most autobiographical way in which it is written, though, never having been translated, it has attracted little if any attention from Bacon's biographers. Ego cum me ad utilitates humanas natum existimarem, &c." it begins; that is, "When I came to conceive of myself as born for the service of humanity, and to look upon state employment as amongst those things which are of public right, and patent to all like the wave or the breeze, I proceeded both to inquire what might most conduce to the benefit of men, and to deliberate for what special work I myself had been best fitted by nature. Thereupon I found that no other thing was of so great merit in reference to the human race as the discovery and authorship (*auctoramentum*) of new truths and arts, by which human life may be improved. For even in early times, among uncultivated men, I perceived that the inventors and teachers of the first rude arts had been consecrated and adopted into the number of the Gods; and I remarked that the actions of the heroes who had either built cities, or distinguished themselves as legislators, or wielded supreme power righteously, or overthrown unjust dominations, had been circumscribed in their fame within certain narrow bounds of time and place; but that, as it seemed to me, the invention of new arts, although a thing of less pomp, and a greater adaptation for universality and eternity. And, above all, if any one, not merely bringing to light some particular invention, of however great utility, kindled a new light in nature, which as soon as it dawned illustrated those unvisited coasts lying around whatever is already known, and then as it rose higher

* See *ante*, Vol II. p. 13.

d from ambition, and my life was as it were at a and my health beginning to give way admonished my unfortunate procrastination, and I was assailed frequent fears that I should never in any way fulfil my duty if I neglected those pursuits by means of which I might myself through myself serve men, and gave up time to those which depended upon the will of others, I wholly withdrew from those other objects, according to my earlier determination dedicated myself wholly to the present work. Nor is this resolution lessened for that I perceive in the state of the times approaching decline and downfall of all that system of doctrine and learning which is now in vogue; for, though I dread no incursions of barbarians (unless since the Spanish empire should still grow stronger, to last oppress and reduce to debility other nations by weight and itself by its own weight), yet, what from wars (which, by reason of certain changes of manners but recent introduction, appear to me to be about to involve many countries), and from the malignity of various sects, and from those compendious systems of ease and caution which have crept into the place of industry, no less a tempest seems to impend over literature and science. The art of printing cannot suffice to combat these evils. And so that peaceable learning, which is fostered by ease and quiet, and flourishes under encouragement of rewards and praise, and cannot stand the vehemence of conflicting opinion, and is easily misled by artifices and impostures, gets buried under incumbrances of which I have spoken. Far different is the case with that science, the dignity of which is supported by its useful purposes, and its accomplishments are more solid. And, as I am thus almost secure from the injuries of time, so for the injuries that may be attempted upon me I do not distress myself. For if any one shall object that my philosophy soars too high, I merely reply, that in civil affairs is the place for modesty, in speculation is the place for truth. But if any person shall at me demand actual performances, I say, without any reserve, that I, a man, although not yet old,

ers chapters of the First Book of the Interpretation of
ture." Most, if not all, that is in the *Valerius Termini-*
is to be found in the *Novum Organum*, of which it
probably to be considered as a fragment of an early
etch or rough draught, prepared perhaps at a time when
was intended that the work should be published in
English. But much of the first part of it especially has
Bacon's wonderful power of style. Here is a portion
the First Chapter, entitled 'Of the Limits and End
Knowledge:—

To conclude then: let no man presume to check the
rality of God's gifts, who, as was said, "hath set the
ld in man's heart." So as whatsoever is not God, but
cel of the world, he hath fitted it to the comprehension of
a's mind, if man will open and dilate the powers of his
lerstanding as he may.

But yet evermore it must be remembered, that the least part
nowledge passed to man by this so large a charter from
d, must be subject to that use for which God hath granted
which is the benefit and relief of the state and society of
n; for otherwise all manner of knowledge becometh malign
l serpentine, and therefore, as carrying the quality of the
pent's sting and malice, it maketh the mind of man to
ll, as the Scripture saith excellently, "Knowledge bloweth
but charity buildeth up." And again, the same author
h notably disavow both power and knowledge, such as is
dedicated to goodness or love; for saith he, "If I have all
h, so as I could remove mountains," there is power active;
"I render my body to the fire," there is power passive; "if
peak with the tongues of men and angels," there is know-
ge, for language is but the conveyance of knowledge, "all
e nothing."

And therefore it is not the pleasure of curiosity, nor the
et of resolution, nor the raising of the spirit, nor victory of
, nor faculty of speech, nor lucre of profession, nor ambition
onour or fame, or enablement for business, that are the true
ls of knowledge; some of these being more worthy than
er, though all inferior and degenerate; but it is a restitution
l reinvesting, in great part, of man to the sovereignty and
ver, for whensoever he shall be able to call the creatures by
ir true names, he shall again command them, which he had
his first state of creation. And to speak plainly and clearly,

it is a discovery of all operations and possibilities of things from immortality, if it were possible, to the mechanical practice. And therefore knowledge that but to satisfaction is but as a courtesan, which is for and not for fruit or generation. And knowledge that to profit, or profession, or glory, is but as the gold thrown before Atalanta; which while she goeth as stoopeth to take up, she hindereth the race. And knowledge referred to some particular point of use, is but as Hercules which putteth down one tyrant; and not like Hercules did perambulate the world to suppress tyrants, and give monsters in every part.

It is true, that in two points the curse is peremptory, to be removed: the one that vanity must be the end of human effects; eternity being resumed, though the times and periods may be delayed. The other that the use of the creature being now turned into reluctance, that cannot otherwise be exercised and administered but by labour, as well in inventing as in executing; yet nevertheless chiefly that labour and travel which is described by the furrow of the brows more than of the body; that is, such travel joined with the working and discussion of the spirit in the brain; for as Solomon saith excellently, "The fool putteth in more strength, but the wise man considereth which way, signifying the election of the mean to be more matter than the multiplication of endeavour. It is true also that a limitation rather potential than actual, which is where the effect is possible, but the time or place yieldeth not the ground or basis whereupon man should work. But notwithstanding these precincts and bounds, let it be believed, and thereof made to time, with renunciation nevertheless to vain and abusing promises of alchemists and magicians, such like light, idle, ignorant, credulous, and fantastical sects, that the new found world of land was not in addition to the ancient continent, than there remained that day a world of inventions and sciences unknown, having to those that are known, with this difference, that the regions of knowledge will seem as barbarous compared to the new, as the new regions of people seem barbarous compared to many of the old.

The dignity of this end, of endowment of man's new commodities, appeareth by the estimation that is made of such as guided thereunto; for whereas

tes, lawgivers, extirpers of tyrants, fathers of the people, were honoured but with the titles of worthies or demi-gods, imitators were ever consecrated amongst the gods themselves. And if the ordinary ambitions of men lead them to seek the amplification of their own power in their countries, and a better ambition than that hath moved men to seek the amplification of the power of their own countries amongst other nations, yet again and more worthy must that aspiring be which seeketh the amplification of the power and kingdom of mankind over the world : the rather because the other two prosecutions are ever culpable of much perturbation and injustice ; that this is a work truly divine, which cometh in *aura leni*, without noise or observation.

The access also to this work hath been by that part or passage, which the Divine Majesty, who is unchangeable in his ways, doth infallibly continue and observe ; that is the felicity wherewith he hath blessed an humility of mind, such as rather poureth to spell and so by degrees to read in the volumes of creatures, than to solicit and urge, and as it were, to incite a man's own spirit to divine and give oracles unto him. For as in the inquiry of divine truth the pride of man hath been inclined to leave the oracles of God's word, and to vanish the mixture of their own inventions ; so in the self-same manner in inquisition of nature, they have ever left the oracles of God's works, and adorned the deceiving and deformed imagery, which the unequal mirrors of their own minds have presented unto them. Nay, it is a point fit and necessary in the front and beginning of this work without hesitation or reservation to be professed, that it is no less true in this human kingdom of knowledge than in God's kingdom of heaven, that man shall enter into it, "except he become first as a little child."

Another much shorter piece also published in Stevens's Second Collection is entitled 'Mr. Bacon in Praise of Knowledge.' From this inscription it would seem to have been written before 1603, when Bacon was sighted. He had, however, already adopted the opinions with respect to the current philosophy which he ever after retained, as may sufficiently appear from the following extract :—

Are we the richer by one poor invention by reason of all the learning that hath been these many hundred years ? The in-

sets in motion, and the rest in order, the higher the
 and so are compelled to imagine a double motion;
 how evident is it, that that which they call a contrary
 is but an abatement of motion. The fixed stars overgo
 and so in them and the rest all is but one motion, and
 rer the earth the slower. A motion also whereof air
 ter do participate, though much interrupted. But why
 a conference of pleasure enter into these great matters,
 that pretending to know much, I should forget what is
 ple? Pardou me, it was because all things may be
 d and adorned with speeches, but knowledge itself is
 beautiful than any apparel of words that can be put upon
 d let not me seem arrogant without respect to these
 puted authors. Let me so give every man his due, as
 time his due, which is to discover truth. Many of
 men had great wits, far above mine own, and so are
 n the universities of Europe at this day. But alas, they
 nothing there but to believe; first to believe that others
 at which they know not; and after themselves know
 ick they know not. But indeed facility to believe,
 nce to doubt, temerity to answer, glory to know, doubt
 adict, end to gain, sloth to search, seeking things in
 resting in part of nature; these and the like have been
 gs which have forbidden the happy match between the
 f man and the nature of things; and in place thereof
 arried it to vain notions and blind experiments; and
 e posterity and issue of so honourable a match may be,
 hard to consider. Printing, a gross invention; artillery,
 that lay not far out of the way; the needle, a thing
 uown before; what a change have these three made in
 ld in these times; the one in the state of learning, the
 the state of war, the third in the state of treasure, com-
 s, and navigation! And those, I say, were but stumbled
 nd lighted upon by chance. Therefore, no doubt, the
 uty of man lieth hid in knowledge; wherein many
 re reserved, which kings with their treasure cannot buy,
 h their force comand; their spials and intelligencers
 : no news of them; their seamen and discoverers cannot
 re they grow: now we govern nature in opinions, but
 thrall unto her in necessity; but if we would be led by
 nvention, we should command her in action.

ly, there is a paper entitled 'A Discourse touch-
 Helps for Intellectual Powers,' originally pub-
 11.

ished in the First Part of the *Resuscitatio* (1657), commences thus:—

I did ever hold it for an insolent and unlucky say, “*Faber quisque fortunæ suæ* ;” except it be uttered as a hortative or spur to correct sloth. For otherwise, if it be believed as it soundeth, and that a man entereth into a false imagination that he can compass and fathom all accidents and ascribeth all successes to his drifts and reaches, and contrary to his errors and sleepings, it is comen only see the evening fortune of that man is not so prosperous as of that without slackening of his industry attributeth much felicity and Providence above him. But if the sentence be turned to this, “*Faber quisque ingenuus*,” it were somewhat more true, and much more profitable, because it would teach men to bend themselves to reform those imperfections in themselves, which now they seek but to cover, and to attain the virtues and good parts, which now they seek but to save in show and demonstration. Yet notwithstanding every man attempteth to be of the first trade of carpenters, and few bend themselves to the second; whereas nevertheless the rising fortune seldom amendeth the mind; but on the other side removing of the stands and impediments of the mind do often clear the passage and current to a man’s fortune. It is certain it is, whether it be believed or no, that as the most excellent of metals, gold, is of all others the most pliant and most enduring to be wrought; so of all living and breathing substances, the perfectest man is the most susceptible of better improvement, impression, and alteration, and not only in his body but in his mind and spirit; and there again not only his appetite and affection, but in his powers of wit and reason.

There are many proofs, it is then remarked, of what great things may be done with the body by exercise and custom. “It is true, no doubt, that some persons are apter than others; but so as the more aptness can be improved to perfection, but the less aptness doth not disable, so for example, the more apt child that is taken to be a *funambulo* (rope-dancer) will prove more excellent in his feats; but the less apt will be *gregarius funambulo* (ordinary rope-dancer) also.” The will is still more potent, and admits more medicines to cure and alter. Of these the most sovereign is religion, the next

and apprehension ; the third is example ; the fourth when one affection is heated and corrected by another, cowardice by shame ; “ and lastly, when all these uns or any of them have new-framed or formed human s, then doth custom and habit corroborate and confirm the rest.” The effect of any remedy applied to the d is usually either to reform the affections really and y, or else to conceal them, and sometimes to pretend represent them ; “ of the former sort whereof the mples are plentiful in the schools of philosophers, in all other institutions of moral virtue ; and of the er sort the examples are more plentiful in the courts orinces and in all politic traffic ; where it is ordinary ind, not only profound dissimulations, and suffocating affections, that no note or mark appear of them outdly ; but also lively simulations and affectations, carrythe tokens of passions which are not, as *risus jussus* (commanded laugh) and *lacrymae coactae* (the forced s), and the like.” The proper subject indicated by title of the paper is then entered upon, but only in a undigested notes. “ The intellectual powers,” it is erved, “ have fewer means to work upon them than will or body of man ; but the one that prevaiileth, is, exercise, worketh more forcibly in them than in rest.” ‘ Five Points ’ relating to the subject of Exses are afterwards set down ; and then the following arks are made in conclusion :—

he exercises in the universities and schools are of memory invention ; either to speak by heart that which is set down *utim*, or to speak *extempore* ; whereas there is little use in on of either or both ; but most things which we utter are er verbally premeditated nor merely extemporal. Thereexercise would be framed to take a little breathing and to ider of heads ; and then to fit and form the speech *extempore*. This would be done in two manners ; both with ing and tables, and without ; for in most actions it is pered and passable to use the note, whereunto if a man be uot stomed, it will put him out.

here is no use of a narrative memory in *accademiis*, namely, circumstances of times, persons, and places, and with

names; and it is one art to discourse and another to relate and describe; and herein use and action is most conversant.

Also to sum up and contract, is a thing in action of very general use.

This paper, or at least the first part of it, was sent by Bacon to his friend, the learned Sir Henry Saville, Provost of Eton College, accompanied with a letter in which he tells Sir Henry that the thoughts he had hastily set down had occurred to him as he was returning home from a visit he had made to him on his invitation at Eton "where," says he, "I had refreshed myself with company which I loved." Sir Henry Saville was Provost of Eton from 1596 till his death in February, 1622. It is probable that this letter was addressed to him toward the close of his incumbency. He was succeeded as Provost by Mr. Thomas Murray, who, however, held the office only for a few months, having died on the 1st of April, 1623. Upon the occurrence of this last vacancy or rather when it was anticipated, Bacon, in his fallen fortunes, made application for the place. Among the Letters published by Birch (1763) is one to Mr. Secretary Conway, dated from Gray's Inn, the 25th of March, in which he says, "Good Mr. Secretary, when you did me the honour and favour to visit me, you did not only in general terms express your love unto me, but, as a re- friend, asked me whether I had any particular occasion wherein I might make use of you. At that time I had none; now there is one fallen. It is, that Mr. Thomas Murray, Provost of Eton, whom I love very well, is like to die. It were a pretty cell for my fortune. The college and school I do not doubt but I shall make to flourish. His majesty, when I waited on him, took notice of my wants, and said to me, that, as he was a king, he would have care of me. This is a thing somebody would have; and costs his majesty nothing." Inclosed was a shorter note to the king, in which we find him repeating the pathetic expression—"Your beadsman addressed himself to your majesty for a cell to retire into." Conway's reply, dated Royston, March 27th, informs Bacon

he had delivered his letter to the king; adding, "I give you his majesty's answer, which was; 'That he not value you so little, or conceive you would have led your desires and your worth so low; that it had a great deal of ease to him to have had such a scant- of your mind, to which he could never have laid so al a measure.'" His majesty, Conway goes on to further said that, since Bacon's intentions moved way, he would study his accommodation; and, igh a sort of engagement had been already made a Sir William Becher, he expressed a hope that other way might perhaps be found of satisfying erson. Becher, it appears, had obtained a promise e place from the Marquis (soon after this created) of Buckingham, who was now in Spain, and upon e friendship Bacon would otherwise have chiefly re-

"My most noble friend, the marquis," he had said iting to Conway, "is now absent. Next to him I not think of a better address than to yourself, as one to put on his affection." He continued, however, ess the matter. Acknowledging Conway's answer e 31st, he wrote:—"I am very much bound to his ty, and I pray you, Sir, thank his majesty most ly for it, that, notwithstanding the former design- of Sir William Becher, his majesty, as you write, : out of hope, in due time, to accommodate me of ell, and to satisfy him otherwise. Many conditions, ubs, may be as contenting to that gentleman, and ears may expect them. But there will hardly fall, ially in the spent hour-glass of my life, anything so me, being a retreat to a place of study so near Lon- and where, if I sell my house at Gorhambury, as I se to do, to put myself in some convenient plenty, y be accommodated of a dwelling for summer-time.

therefore, good Mr. Secretary, further this his ty's good intention by all means, if the place fall." ad also written in urgent though general terms both ickingham on the 30th, and to Count Gondomar on 8th, intrusting the letters, and, as it would seem, ecific explanation of what he wanted, to Sir John

I know how unfit it is for me to write to your lordship with any other hand than mine own; but, by my faith, my fingers are so disjointed with this fit of sickness, that I cannot steadily hold a pen." It is evident, however, that Bacon did not think he was dying when it was written. John Aubrey relates, that when Bacon was attacked by his illness he was accompanied by Dr. Witherborne, the King's Physician, and that, falling snow on the ground as they approached Highgate, coming from London, they alighted out of the coach and went into a poor woman's house at the foot of Highgate Hill, where they bought a hen, and stuffed the body with snow, Bacon assisting in the operation with his own hands. Aubrey further states that the bed into which he was put at Lord Arundel's house was damp, and had never been slept in for a year before. He breathed his last in the arms of his friend, and relation by marriage, Julius Caesar, the Master of the Robes, who had been sent for at the commencement of his illness.

appears to have been subsequently compiled. The two parts were printed for the first time together, in 4to., at London, in 1630. In the Dedication of 'The Maxims' Bacon speaks of the collection as having been suggested both by what had been published by the Lord Chancellor, speaking for the queen, in full parliament in the year 1593, and much more by what he had himself been vouchsafed to understand from her majesty, "imparting [importing?]," he says, "a purpose for these many years infused into your majesty's breast to enter into a general amendment of the state of your laws, and to reduce them to more brevity and certainty, that the great hollowness and unsafety in assurances of lands and goods may be strengthened, the snaring penalties that lie upon many subjects removed, the execution of many profitable laws revived, the judge better directed in his sentence, the counsellor better warranted in his counsel, the student eased in his reading, the contentious suitor, that seeketh but vexation, disarmed, and the honest suitor, that seeketh but to obtain his right, relieved." In giving an account of his work in the Preface he says:—"I hold every man a debtor to his profession; from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavour themselves, by way of amends, to be a help and ornament thereunto. . . . Having therefore from the beginning come to the study of the laws of this realm with a mind and desire no less, if I could attain into it, that the same laws should be the better by my industry than that myself should be the better by the knowledge of them, I do not find that by mine own travail, without the help of authority, I can in any kind prefer so profitable an addition unto that science as by collecting the rules and grounds dispersed throughout the body of the same laws." The collection comprehends twenty-five general maxims or rules, which are illustrated by explanations and short examples. No rules, it is stated, have been omitted because they are *ordinary or vulgar*; those that concur with the civil or *Roman law* have been set down in the same words that

the civilians use ; no certain method or order has been observed, because (a favourite principle with Bacon) " this delivering of knowledge in distinct and disjoint aphorisms doth leave the wit of man more free to turn and to toss, and to make use of that which is so delivered to more several purposes and applications ; " the rules are set down only in Latin, without regard to grace or ornament of expression, or to anything in style except the preservation of the proper terms and technical language of the law ; and no references to the books are given ; " for although," says Bacon, " the meanness of mine own person may now at first extenuate the authority of this collection, and that every man is so venturesome to control ; yet surely, according to Gamaliel's reason, if it be of weight, time will settle and authorize it ; if it be light and weak, time will reprove it. So that, to conclude, you have here a work without any glory of affected novelty, or of method, or of language, or of quotations and authorities, dedicated only to use, and submitted only to the censure of the learned and chiefly of time." What chiefly, however, makes the maxims profitable and instructive, he conceives, is the examples with which he has accompanied them. Finally, he adds, " Though I have thus, with as much discretion and foresight as I could, ordered this work, and, as I may say, without all colours or shows, have banded it best to profit ; yet nevertheless, not wholly trusting to mine own judgment, having collected three hundred of them, I thought good, before I brought them all into form, to publish some few, that, by the taste of other men's opinions in this first, I might receive either approbation in mine own course or better advice for the altering of the other which remain ; for it is great reason that that which is intended to the profit of others should be guided by the conceits of others." The Second Part, on the Use of the Law, is a compendious account of the practice and administration of the English law both in criminal and civil cases. It appears, however, to be unfinished. The use of the law is defined as consisting " principally in these three things : 1. To

men's persons from death and violence; 2. To use the property of their goods and lands; 3. For preservation of their good names from shame and injury." But the last of these three heads is not entered. The tract is very clearly written, and is curious in the details it contains respecting some now obsolete institutions and forms.

Another law tract is entitled 'The learned Reading of Francis Bacon, one of her Majesty's Counsel at Law, upon the Statute of Uses; being his double Reading before the Hon. Society of Gray's Inn, 42 Eliz.'" (1600).

It was not printed till the year 1642. "When this tract was first published," says Blackbourne, "the state of the law resembled the state of monarchy, both being now low ebb; and none of our noble author's works had been more miserably racked and disjointed than before us. I have been fortunate in procuring a corrected copy of the whole; and, farther still, a second and much better copy in MS., which I take, upon comparison of hands, to be the character of our author's amanuensis." Blackbourne's MS., however, contained part of the tract; but the emendations it effected were so important, as to render, he states, the tract in a manner new. The Statute of Uses is the 27th of VIII. c. 10; "a law," says Bacon, "whereupon inheritances of this realm are tossed at this day, like a ship upon the sea, in such sort, that it is hard to say which bark will sink, and which will get to the haven; and this is to say, what assurances will stand good, and what will not." This Reading upon the Statute of Uses is considered to be creditable to Bacon's legal learning.

The 'Account of the lately erected Service called the Office of Compositions for Alienations,' first printed in Appendix to the Third Volume of what is called Let's edition of Bacon's Works, 3 vols. folio, 1753, is a MS. in the Library of the Inner Temple, and is ascribed as having been "written (about the close of 1633) by Mr. Francis Bacon"—a performance in the execution of which Bacon's biographers have been particularly enthusiastic, and which has kept its place

among his works down to the present day—is certainly not his at all, but was most probably compiled by William Lambard, the author of the ‘Perambulation of the County of Kent,’ the ‘Archaionomia,’ and other works. It has not a trace of Bacon’s manner.

‘The Arguments in Law, of Sir Francis Bacon Knight, the King’s Solicitor-General, in certain great and difficult Cases,’ were first published by Blackbourn in his Edition of Bacon’s Works, 1730. “The world says Blackbourn, “is indebted for this treasure to the humanity of a worthy man, Mr. Thomas Richardson, apothecary, of Aldersgate Street, who is a citizen of the world, a credit to his employ, and a blessing to his neighbourhood. Mr. Stephens, knowing these arguments to be authentic, and the unquestionable writings of our noble author, was so obliging as to peruse and examine them sheet by sheet, as the press delivered them; and I can vouch they are printed to a degree of nicety from the fair original.” The cases are, 1. The Case of Impeachment of Waste, argued before all the Judges in the Exchequer Chamber; 2. Low’s Case of Tenures, in the King’s Bench; 3. The Case of Reversion of Uses, in the King’s Bench; 4. The Jurisdiction of the Marches. The arguments must have been heard between June, 1607, and October, 1613, the period of Bacon’s tenure of the office of Solicitor-General. They had been intended for publication by Bacon himself, as appears from a short but characteristic Dedication to “Loving Friends and Fellows, the Readers, Ancient Utter-Barristers, and Students of Gray’s Inn, in which, after observing that the publication of such pleadings had been usual both in ancient times and in other modern nations, he proceeds: “I know no reason why they should not be brought in use by the professors of law for their arguments in principal cases. And I think the more necessary, because the compendious form of reporting resolutions, with the substance of reasons, lately used by Sir Edward Coke, Lord Chief Justice of the King’s Bench, doth not delineate or set out to the young practisers of the law a method and

argument for them to imitate. It is true I could have wished some abler person had begun ; but it is a good order sometimes to begin with the meanest. Nevertheless, thus much I may say with modesty, that these arguments which I have set forth, most of them, upon subjects not vulgar ; and therewithal, in regard to the commixture which the course of my life hath made law with other studies, they may have the more variety, and perhaps the more depth of reason : for the reasons of municipal laws, severed from the grounds of nature, manners, and policy, are like wall-flowers, which, though they grow high upon the crests of states, they have no deep root. Besides, in all public services, I ever valued my reputation more than my pains ; and therefore, in weighty causes I always used extraordinary diligence. . . . This work I knew not to whom to dedicate, rather than to the Society of Gray's Inn, the place whence my father was called to the highest place of justice, and where myself have studied and had my procedure so far as, by his majesty's grace, if not singular, grace, to be of both his councils." This must have been written, apparently, not only after he had become Attorney-General on the removal of Sir Thomas Egerton to the King's Bench, in October, 1613, but after he had been made a privy-counsellor in June, 1616. By being of both councils he means, apparently, the having been made a privy-counsellor at the same time that he held the office of attorney-general, or chief of the King's counsel learned in the law ; according to what he says in the beginning of his ' Proposition touching the Amendment of the Laws,' where he speaks of such a number of offices or honours as more than what had been seen these hundred years before." *

The remaining pieces that come under the present head, with the dates of the first publication of each, as far as we have been able to ascertain them, are as follow :—
draught of an Act against an Usurious Shift of Gain

In Vol. I. p. 113, misprinted "three hundred years be-

in delivering Commodities instead of Money,' in Second Part of the *Resuscitatio* (1670); 'A Proposition toward the Union of the Laws of England and Scotland,' addressed to the King, in Stephens's Second Collection (1734); 'An Explanation what manner persons those should be that are to execute the power or ordinance of the King's Prerogative (of doubtful authenticity), with the 'Essay of a King,' in 1642, again in the 'Remains of the Right Honourable Francis Lord Verulam,' &c., 1648, and 'The Mirror of Wisdom and Eloquence' (the same with the *Remains*), 1651; 'The Office of Constables, Original and Use of Colleet, Sheriff's Turn, &c., with the Answers to Questions propounded by Sir Alexander Hay, touching the Office of Constables; A.D. 1608,' the first printed we have not been able to discover; 'The Argument of Sir Francis Bacon, Knt., Majesty's Solicitor-General, in the Case of the Bishops of Scotland, in the Exchequer Chamber, before Lord Chancellor and all the Judges of England,' separately, in 4to., Lon. 1641, and afterwards in the Second Part of the *Resuscitatio* (1670); 'A Proposition to Majesty, by Sir Francis Bacon, Knt., His Majesty's Attorney-General and one of his Privy Council, touching the Compiling and Amendment of the Laws of England,' written between June, 1616 and March, 1617, in the First Part of the *Resuscitatio* (1657); 'An Answer to King James of a Digest to be made of the Law of England,' in 'Certain Miscellany Works of the Right Honourable Francis Lord Verulam, &c., published by William Rawley, D.D.' 1629; 'The Judicial Charge of Sir Francis Bacon, Knt., the King's Solicitor, at the Commission of Oyer and Terminer held for the Verge of the Court,' delivered in 1611, 4to. Lon. 1611, and again in the Second Part of the *Resuscitatio* (1670); 'A Charge delivered by Sir Francis Bacon, Knt., the King's Solicitor-General, at the arraignment of Lord Sanquhar in the King's Bench at Westminster'

* See ante, Vol. I. p. 86.

† See ante, Vol. I. p. 86.

29th June, 1612, for the murder of John Turner, of which he was found guilty and for which he suffered death), in the Second Part of the *Resuscitatio* (1670); 'The Charge of Sir Francis Bacon, Knight, the King's Attorney-General, touching Duels, upon an information in the Star-Chamber against Priest and Wright; with the Decree of the Star-Chamber in the same cause' (26th January, 1614), 4to. Lon. 1614, and in the Second Part of the *Resuscitatio* (1670); 'The Charge of Sir Francis Bacon, Knight, the King's Attorney General, against William Talbot, a Counsellor at Law, of Ireland, upon an information in the Star-Chamber, *ore tenus*, for a writing under his hand, whereby the said William Talbot, being demanded whether the doctrine of Suarez touching the deposing and killing of Kings excommunicated were true or no, he answered that he referred himself unto that which the Catholic Roman Church should determine thereof,' delivered in Hilary Term, 1613, in the First Part of the *Resuscitatio* (1657); 'A Charge given by Sir Francis Bacon, Knight, His Majesty's Attorney General, against Mr. Oliver St. John, for scandalizing and traducing, in the public sessions, Letters sent from the Lords of the Council touching the Benevolence,' in the First Part of the *Resuscitatio* (1657); 'The Charge of Owen, indicted for High Treason, in the King's Bench, by Sir Francis Bacon, Knight, his Majesty's Attorney General,' in 1615, for affirming, conditionally, that if the King were excommunicated, it were lawful to kill him), in the First Part of the *Resuscitatio* (1657); 'The Charge of Sir Francis Bacon, Knight, the King's Attorney General, against Mr. Lumsden, Sir John Wentworth, and Sir John Holmes, for Scandal and traducing the King's justice in the proceedings against Weston in the Star-Chamber, November, 1615' (Weston was one of the persons implicated in the poisoning of Sir Thomas Overbury), in the First Part of the *Resuscitatio* (1657); 'The Charge of Sir Francis Bacon, Knight, His Majesty's Attorney General, against Frances Countess of Somerset, intended to have been spoken by him at her

an, Lord Chancellor of England, Anno Domini 1620 and 1621.'

Of Bacon's Political Writings the piece which is placed first in the common editions of his collected Works is a tract entitled 'Of the State of Europe,' originally printed in Stephens's Second Collection (1734). Mallet describes it as having been written by Bacon in 1580; "as I have discovered," he adds, "by a circumstance mentioned in it. He says that Henry III. of France was then 30 years old: now that King began his reign in 1574, at the age of 24 years." This is a somewhat simple piece of self-gratulation in Mallet; if he had read on he would have made many more such discoveries, but he would also have found that they would not avail him much; for, although the ages of most of the other reigning sovereigns are mentioned as well as that of Henry III. of France, they are too incorrectly given to be of any use. Thus, the Pope, Gregory XIII., who is stated to have been "of the age of 70 years," was 78 in 1580; Philip II. of Spain, described as "about 60 years of age," was then only 53; and so in other cases. We would not infer from these discrepancies, with the writer of the Life of Bacon in the *Biographia Britannica*, that the tract was written at different periods; it evidently describes one state of things, and its meaning and purpose are lost if we suppose otherwise. Its inaccuracies upon a point of little or no real importance, and as to which exact information was not readily attainable, are easily accounted for. But the date of its composition is sufficiently indicated by the mention of some facts of another description as to which the writer could not be mistaken. For instance, in one place he says:—"At this present the King [of France] is about to restore Don Antonio, King of Portugal, whereto are great levies and preparation;" and again:—"D. Antonio, elect King of Portugal, thrust out by the King of Spain, is now in France, where he hath levied soldiers, whereof part are embarked, &c." Now this expedition of Don Antonio

POLITICAL WRITINGS.

The form of his government is absolute, depending only of his will and pleasure, though retaining in many things the ancient offices and show; but those magistrates resolve nothing without his express directions and pleasure. Privy council he hath none, but repositeth most his trust on sound secretaries, and conferreth chiefly with his wife, as his father did with one of his secretaries. For matter of examinations, one Corbetta hath the especial trust; he doth favour the people more than the nobility, because they do bear an old grudge to the gentlemen, and the people are the more in number, without which the nobility can do nothing. One thing in him giveth great contentment to the subjects, that he vouchsafeth to receive and hear all their petitions himself; and in his absence from Florence, those that have suit do resort to the office, and there exhibit their bills endorsed; whereof within three days absolute answer is returned to them, unless the matter be of great importance, then have they direction how to proceed. He is a great justicer, and for the ease of the people, and to have a better eye over justice, hath built hard by his palace a fair row of houses for all offices together in one place.

Two years sithence he married la Signora Bianca, his concubine, a Venetian of Casa Capelli, whereby he entered into amity with the Venetians; with the Pope he hath great intelligence, and some affinity by the marriage of Signor Giacomo, the Pope's son, in Casa Storza.

To the emperor he is allied, his first wife being the Empress Maximilia's sister.

With Spain he is in a strait league, and his mother was of the house of Toledo; his brother likewise, D. Pietro, married in the same house. With France he standeth at this present in some mauling.

With Ferrara always at jar, as with all the Dukes of Italy for the preasence in some controversy.

All his revenues arise of taxes and customs; his domains are very small.

He hath by his first wife one son of the age of four or five years, and four daughters; he hath a base child by this woman and a base brother, D. Joanni, sixteen years of age, of great expectation.

One of the most remarkable passages is that relating to the Duke of Anjou, recently dismissed from his suitorship for the hand of Elizabeth, but only about to enter upon that scene of his brief government.

Netherlands which showed what an erroneous est of him the world had previously formed :—

Francis, Duke of Anjou and of Brabant, for his callin quality greatly to be considered as any prince this day being second person to the king his brother, and in like to succeed him. There is noted in the disposition of prince a quiet mildness, giving satisfaction to all facility of access, and natural courtesy; understanding speech great and eloquent; secrecy more than common to the French; from his youth always desirous of action which thing has made him always followed and respected and though hitherto he hath brought to pass no great part having suffered great wants and resistance, both at home abroad, yet by the intermeddling is grown to good experience, readiness, and judgment, the better thereby able to guide govern his affairs, both in practice, in treaty, and in war. Moreover, the diseased estate of the world doth so concur to this his active forwardness, as it giveth matter to work on and he is the only man to be seen of all them in distress desirous of alteration: a matter of special furtherance such as have achieved great things, when they have found matter disposed to receive form.

And there is to be found in no other prince in this part of the world so towards and forward as the Duke, towards whom they in distress may turn their eyes. We do plainly see the most countries of Christendom so unsound and shal be in estate, as desireth the help of some great person, to come together and join again the pieces asunder and out of which wherefore the presumption is great that if this prince continue in this his course, he is likely to become a mighty potentate. If one enterprise failing, other will be offered, and still men at ease and desirous of a head and captain, will run to him that is fittest to receive them; besides, the French, desirous to shake off the civil wars, must needs attempt somewhat. This Duke first had intelligence with the Count Ludowick during King Charles's days, and an enterprise to escape from court, and in this king's time joined with them of the rebels and malcontents; after was carried against them; sought marriage with her Majesty, so mighty a princess, as it was marry might with his activity.

This passage, by the by, confirms what we have said as to the time when the paper was written;

Anjou did not become Duke of Brabant till the
rt of the year 1582.

panegyric on Elizabeth entitled ' Mr. Bacon's
e in the Praise of his Sovereign,' first published
ens's Second Collection (1734), has been already
among the Historical Writings.*

iece that stands next in order is ' Certain Ob-
is upon a Libel published this present year,
itled A Declaration of the True Causes of the
roubles pre-supposed to be intended against the
' England.' This is an elaborate tract, filling
pages of the First Part of the *Resuscitatio*, in
t seems to have been for the first time printed ;
he editors make no mention of any earlier im-
, although it had evidently been written with
ign of immediate publication.† The libel, or
t, to which it is a reply, is supposed to have
e of the productions of the famous Parsons, the

It has all Bacon's characteristic ingenuity of
g and power of style, as will sufficiently appear
following extracts :—

just and honourable for princes, being in wars to-
at howsoever they prosecute their quarrels and debates
and acts of hostility, yea, though the wars be such, as
end the utter ruin and overthrow of the forces and states
other, yet they so limit their passions as they preserve
s sacred and inviolable, that is, the life and good name
ther. For the wars are no massacres and confusions,
are the highest trials of right, when princes and states
nowledge no superior upon earth, shall put themselves
justice of God for the deciding of their controversies,
success as it shall please him to give on either side ;
a the process of particular pleas between private men,
ought to be ordered by the rules of civil laws, so, in
eedings of the war, nothing ought to be done against
f nations or the law of honour : which laws have ever
ed those two sorts of men, the one conspirators against

Vol. I. p. 215.

incorrectly spoken of, therefore, in Vol. I. p. 16, as
first publication."

being second person to the king his brother,
to succeed him. There is noted in the duke
prince a quiet mildness, giving satisfaction
facility of access, and natural courtesy, un-
speech great and eloquent; secrecy more than
the French, from his youth always desired
which thing has made him always followed
and though hitherto he hath brought to pass
having suffered great wants and resistance, he
abroad, yet by the intermeddling is grown to
readiness, and judgment, the better thereby ab-
govern his affairs, both in practice, in treatie.
Moreover, the diseased estate of the world doth
thus his active forwardness, as it giveth matter
and he is the only man to be seen of all the
desirous of alteration: a matter of special force
such as have achieved great things, when the
matter disposed to receive form.

And there is to be found in no other prince
the world so towards and forward as the Duke
they in distress may turn their eyes. We do
the most countries of Christendom so unsonne
estate, as deserveth the help of some great prince
gather and join again the pieces asunder
wherefore the presumption is great that if this

you did not become Duke of Brabant till the year 1582.

egytic on Elizabeth entitled 'Mr. Bacon's in the Praise of his Sovereign,' first published in his Second Collection (1734), has been already among the Historical Writings.*

That stands next in order is 'Certain Objections upon a Libel published this present year, entitled A Declaration of the True Causes of the troubles pre-supposed to be intended against the Kingdom of England.' This is an elaborate tract, filling 12 pages of the First Part of the *Resuscitatio*, in which the editors make no mention of any earlier imputation, although it had evidently been written with a view to which it is a reply, is supposed to have been one of the productions of the famous Parsons, the

It has all Bacon's characteristic ingenuity of argument and power of style, as will sufficiently appear from the following extracts:—

There were just and honourable for princes, being in wars to-
that howsoever they prosecute their quarrels and debates
arms and acts of hostility, yea, though the wars be such, as
pretend the utter ruin and overthrow of the forces and states
of another, yet they do limit their passions as they preserve
things sacred and inviolable, that is, the life and good name
of one. For the wars are no massacres and confusion
they are the highest trials of right, when princes and states
acknowledge no superior upon earth, shall put themselves
in the justice of God for the deciding of their controversies
much success as it shall please him to give on either side
as, in the process of particular pleas between private men,
things ought to be ordered by the rules of civil laws, so
practiced even of the war, nothing ought to be done against
the law of nations or the law of honour: which laws have con-
demned those two sorts of men, the one conspirators against

* See Vol. I. p. 215.

† It is incorrectly spoken of, therefore, 'a Vol. I. p. 1' in Bacon's first publication."

interpreted not only to extend to divisions and distractions
 government, but also to frequent changes in succession,
 fearing that the change of a prince bringeth in many
 changes which are harsh and unpleasant to a great part of the
 subjects. It appeareth then, that of the line of five hundred
 years and more, containing the number of 22
 God hath already prolonged her Majesty's reign to
 sixteen of the said two-and-twenty, and, by the end of
 present year (which God prosper), she shall attain to be
 with two more, during which time there have deceased
 emperors, as many French kings, twice so many bishops
 and cardinals. Yea, every state in Christendom, except Spain, have
 had sundry successions: and, for the King of Spain, he
 is now so infirm, and thereby so retired, as the report of his
 death serveth for every year's news; whereas her Majesty
 (as be given to God), being nothing decayed in vigour of
 mind and strength, was never more able to supply and sustain
 the weight of her affairs, and is, as far as standeth with the
 safety of her Majesty's royal state, continually to be seen, to
 great comfort and heart-ease of her people.
 The fourth blessing is plenty and abundance; and first, for
 food and all victuals, there cannot be more evident proof of
 plenty than this, that, whereas England was wont to be fed by
 corn from countries from the east, it sufficeth now to feed other coun-
 tries; and yet there was never the like multitude of people
 in it within the realm. Another evident proof thereof may
 be seen in the good yields of corn which have been, together with
 toleration of vent, hath of late time invited and enticed
 to break up more ground and to convert it to tillage, than
 the penal laws for that purpose made and enacted could
 have by compulsion effect. A third proof may be, that the
 price of grain and victual were never of late years more rea-
 sonable. Now for arguments of the great wealth, in all other
 respects, let the points following be considered.
 There was never the like number of fair and stately houses,
 nor have been built and set up from the ground since her Ma-
 jesty's reign, insonmuch that there have been reckoned in one
 county that is not great, to the number of thirty-three, which
 have been all new built within that time, and whereof the
 best was never built for two thousand pounds.
 There were never the like pleasures, of goodly gardens, and
 walks, pools, and parks as do adorn almost every
 man's house.

There was never the like number of beautiful and costly tombs and monuments, which are erected in sundry churches in honourable memory of the dead.

There was never the like quantity of plate, jewels, sumptuous moveables, and stuff as is now within the realm.

There was never the like quantity of waste and unprofitable ground inclosed, reclaimed, and improved.

There was never the like husbanding of all sorts of ground by fencing, manuring, and all kinds of good husbandry.

The towns were never better built nor peopled, nor principal fairs and markets never better customed nor frequented.

The commodities and ease of rivers cut by hand, and brought into a new channel, of piers that have been built in waters that have been forced and brought against the ground were never so many.

There was never so many excellent artificers, nor so many new handicrafts used and exercised, nor new commodities made within the realm, sugar, paper, glass, copper, dyes, silks, and the like.

There was never such complete and honourable provision of horse, armour, weapons, ordnance of the war. . . .

Now, to pass from the comparison of time to the comparison of place, we may find in the states abroad cause of pity or compassion in some, but of envy or emulation in none; emulation being, by the good favour of God, not inferior to any.

The kingdom of France, which, by reason of the seat of the empire of the west, was wont to have the precedence of the kingdoms of Europe, is now fallen into those calamities that the prophet saith, "from the crown of the head to the sole of the foot, there is no whole place." The divisions are so many and so intricate, of Protestants and Catholics, royalists and leaguers, Bourbonists and Lorrainists, patriots and Spanish, that it seemeth God hath some great work to bring to pass in that nation, yea, the nobility divided from the third estate, and the towns from the field. All which miseries, troubles, and speak, have been wrought by Spain and the Spanish faction.

The Low Countries, which were, within the age of a young man, the richest, the best peopled, and the best built place in Europe, are in such estate as a country is like to be in, which hath been the seat of thirty years' war; and, although the sea-provinces be rather increased in wealth and shipping,

otherwise, yet they cannot but mourn for their distraction from the rest of their body.

The kingdom of Portugal which, of late times, through their merchandizing and places in the East Indies, was grown to be an opulent kingdom, is now at the last, after the unfortunate journey of Affrick, in that state as a country is like to be that is reduced under a foreigner by conquest, and such a foreigner as hath his competitor in title, being a natural Portugal, and no stranger, and having been once in possession yet in life, whereby his jealousy must necessarily be increased, and through his jealousy their oppression, which is apparent by the carrying of many noble families out of their natural countries to live in exile, and by putting to death a great number of noblemen naturally born to have been principal governors of their countries. These are three afflicted parts of Christendom; the rest of the states enjoy either prosperity or tolerable condition.

The kingdom of Scotland, though at this present, by the good regiment and wise proceeding of the king, they enjoy good quiet, yet since our peace, it hath passed through no small troubles, and remaineth full of boiling and swelling humours, but like, by the maturity of the said king, every day increasing to be repressed.

The kingdom of Poland is newly recovered out of great wars about an ambiguous election; and besides, is a state of that composition, that their king being elective, they do commonly choose rather a stranger than one of their own country. A great exception to the flourishing estate of any kingdom.

The kingdom of Swedeland, besides their foreign wars upon their confines, the Muscovites and the Danes, hath been also subject to divers intestine tumults and mutations, as their stories do record.

The kingdom of Denmark hath had good times, especially by the good government of the late king, who maintained the profession of the Gospel, but yet greatly giveth place to the kingdom of England in climate, wealth, fertility, and many other points, both of honour and strength.

The estates of Italy, which are not under the dominion of Spain, have had peace equal in continuance with ours, except in regard of that which hath passed between them and the Turk, which hath sorted to their honour and commendation; but yet they are so bridled and overawed by the Spaniard that possesseth the two principal members thereof, and that

the two extreme parts, as they be like quilllets of freehold being intermixed in the midst of a great honour or lordship so as their quiet is intermingled, not with jealousy alone, but with restraint.

The states of Germany have had, for the most part, peaceable times : but yet they yield to the state of England, not only the great honour of a great kingdom (they being of a mean style and dignity), but also in many other respects, both in wealth and policy.

The state of Savoy having been, in the old Duke's time governed in good prosperity, hath since, notwithstanding the new great alliance with Spain, whereupon they waxed insolent to design to snatch up some piece of France : after the dishonourable repulse from the siege of Geneva, been often distressed by a particular gentleman of Dauphiny : and at the present day the Duke feeleth, even in Piedmont beyond the mountains, the weight of the same enemy, who hath lately shut up his gates and common entries between Savoy and Piedmont.

So as hitherto I do not see but that we are as much bound to the mercies of God as any other nation, considering that the fires of dissension and oppression in some parts of Christendom may serve us for lights to show us our happiness : and the good estates of other places, which we do congratulate with them for, is such nevertheless as doth not stain and exceed ours, but rather doth still leave somewhat wherein we may acknowledge an ordinary benediction of God.

Lastly, we do not much emulate the greatness and glory of the Spaniards, who, having not only excluded the purity of religion, but also fortified against it by their device of the Inquisition, which is a bulwark against the entrance of the truth of God ; having, in recompense of their new purchase of Portugal, lost a great part of their ancient patrimonies of the best countries (being of far greater commodity and value), or, the least, holding part thereof in such sort as most of the other revenues are spent there upon their own ; having laboured with much difficulty, rather smoothed and skinned over than healed and extinguished the commotions of Arragon, having rather sowed troubles in France, than reaped any fruit thereof unto themselves ; having, from the attempt on England, received scorn and disreputation, being at this time with the states of Italy rather suspected than either loved or feared ; having, in Germany and elsewhere, rather much

than any sound intelligence or amity; having no such succession as they need object and reproach, the uncertainty thereof unto another nation, have, in the end, won a reputation rather of ambition than justice, and in the pursuit of their ambition, rather of much enterprising than of fortunate living, and in their enterprising rather of doing things by sure and expense than by forces and valour.

And as for those which we call Brownists, being, when they are at the most, a very small number of very silly and base people here and there, in corners, dispersed; they are now almost worn out (be to God) by the good remedies that have been used, pressed and worn out, so as there is scarce any news of them. Neither had they been much known at all had not John, their leader, written a pamphlet, wherein, as it came into his head, he inveighed more against logic and rhetoric than against the state of the church (which writing was much talked of); and had not also one Barrow (being a gentleman of a good house, but one that lived in London at ordinaries, and well learned to argue in table-talk, and so was very much known in the city and abroad) made a leap from a vain and idle youth to a preciseness in the highest degree, the singleness of which alteration made him very much spoken of. The matter might long before have breathed out. And

I note an honesty and discretion in the libeller which I find nowhere else; in that he did forbear to lay to our charge the sect of the Family of Love; for about twelve years since it was creeping, in some secret places of the realm indeed, a very great heresy derived from the Dutch, and named as it was said; which since, by the good blessing of God and by the good strength of our church is banished and extinct. But so much we see that the diseases, wherewith our church hath been visited, whatsoever these men say, have never been malign and dangerous, or else they have been but blisters in some small ignoble part of the body, which are soon after fallen and gone away. For such also was the methodical and fanatical (for I mean not to determine it) simplicity of Hackett, who must needs have been thought a very dangerous heretic that could never get but two disciples, and yet, as it should seem, perished in their brain; and a dangerous commotioner that in so great and populous a city as London is, could draw but those same two fellows, whom the people rather laughed at, as a May-game, than took any heed to what they did or said; so as it was very true that an honest

poor woman said, when she
to his execution: and she
the latter days, there should
many, but, in faith, thou hast

But, nevertheless, to follow
concerning the nobility; it is
past noblemen (as I take it) a
greater command and away
reason why the possessions of
certain sumptuous veins and
gaming, maintaining a king-
reign more than they did it
because noblemen now-a-days
sons than they were accustom-
principal house receiveth a
command, which is not inde-
it rather to be a commendation
men were wont factiously to
ensued many partialities and
ruption of justice, while the
those that did depend upon
realm finding long since that
men unsafe unto their crown,
thought meet to restrain them;
grew the Statute of Retainers;
prince and the laws and up-
also a congruity with the
in other countries: namely,
nothing so potent and so ab-
past; but otherwise, it may
and pre-eminences of the
exactly preserved unto the
jesty's times; the preceden-
ment of barons: no subpœna
of the Chancery, but letters
honour; besides a number
count, and country. So, if
Majesty and the State, in
and the like, there was never
regard had of the nobility
faithful remembrancer and
eminences unto them; no
gister of their pedigrees,

that man whom he chargeth to have overthrown the
ty, because a few of them, by immoderate expense are
ed, according to the humour of the time, which he hath
en able to resist, no not in his own house. And as for
ders, there have been in thirty-five years but five of any
e nobility, whereof but two came to execution; and
f them was accompanied with restitution of blood in the
en: yea, all of them, except Westmorland, were such as,
er it were by favour of law or government, their heirs
or are like to have, a great part of their possession; and
ich for the nobility.

e states, then, which answered to these two [Spain and
nd] now were Macedon and Athens. Consider, there-
the resemblance between the two Philips of Macedon and
1. He of Macedon aspired to the monarchy of Greece,
of Spain doth of Europe, but more apparently than the
because that design was discovered in his father, Charles
fifth, and so left him by descent; whereas, Philip of
don was the first of the kings of that nation which fixed
at conceits in his breast. The course which this king
acedon held was not so much by great armies and inva-
(though these wanted not when the case required), but by
ice, by sowing of factions in states, and by obliging sun-
articular persons of greatness. The state of opposition
st his ambitious proceedings was only the state of Athens,
w is the state of England against Spain; for Lacedemon
Thebes were both low, as France is now, and the rest of
ates of Greece were, in power and territories, far inferior.
people of Athens were exceedingly affected to peace and
r of expense. But the point which I chiefly make the
arison was that of the orators, which were as counsellors
popular state: such as were sharpest-sighted and looked
st into the projects and spreading of the Macedonians
ting still that the fire, after it licked up the neighbour
, and made itself opportunity to pass, would at last take
of the dominions of Athens with so great advantages as
should not be able to remedy it) were ever charged, both
e declarations of the king of Macedon, and by the impu-
a of such Athenians as were corrupted. to be of his faction,
e kindlers of troubles and disturbers of the peace and
ies; but as that party was, in Athens, too mighty, so as
countenanced the true counsels of the orators, and so bred
uin of that state, and accomplished the ends of that Philip.

y, but was sometimes said by Cephalus, the Athenian, so much renowned in Plato's works, who, having lived near to the age of an hundred years, and in continual affairs and business, was wont to say of himself, "That he never sued any, neither had been sued by any;" who, by reason of his office, hath preserved many great houses from overthrow by relieving sunny extremities towards such, as in their minority, have been cumvented; and towards all such as his lordship might advise did ever persuade sober and limited expense. Nay, to make proof, further, of his contented manner of life, free from guits and covetousness, as he never sued any man, so did he never raise any rent or put out any tenant of his own, nor ever gave consent to have the like done to any of the queen's tenants; matters singularly to be noted in this age.

But, however, by this fellow, as in a false artificial glass, which is able to make the best face deformed, his lordship's sins be set forth; yet, let his proceedings (which be, indeed, his own) be indifferently weighed and considered, and let men call to mind that his lordship was never a violent and transported man in matters of state, but ever respective and moderate; that he was never man in his particular a breaker of covenants, no heavy enemy, but ever placable and mild; that he was never a brewer of holy water in court, no dallier, no flatterer, but ever real and certain; that he was never a bearing-man, nor carrier of causes, but ever gave way to justice and course of law; that he was never a glorious, wilful, proud man, but ever civil and familiar, and good to deal withal; that in the course of his service he hath rather sustained the reproach, than sought the fruition of honour or profit, scarcely sparing any time from his cares and travails to the sustentation of his health. That he never had nor sought to have for himself and his children any pennyworth of land or goods that pertained to any attainted of any treason, felony, or otherwise; that he never had or sought any kind of benefit by any forfeiture to her Majesty; that he was never a factious commander of men, as he that intended any ways to besiege her, by bringing in men at his devotion, but was ever a true reporter unto her Majesty of every man's deserts and abilities; that he never took the course to unquiet or offend, no, nor exasperate her Majesty, but to content her mind and mitigate her displeasure; that he ever bare himself reverently and without scandal in matters of religion, and without blemish in his private course of life; let men, I say, without passionate

„because he offered no play ;” and the Queen-mother of France, a very politic princess, said of him, “That he should have been of the council of Spain, because he despised the occurrences and rested upon the first plot.” So that if he were left, it is hard to say who is wise.

He saith, “He hath brought in his second son, Sir Robert Cecil, to be of the council, who hath neither wit nor experience. Which speech is as notorious an untruth as is in all the world ; for it is confessed by all men that know that gentleman, that he hath one of the rarest and most excellent wits of England, with a singular delivery and application of the same : whether it be to use a continued speech, or to negotiate, or to speak in writing, or to make report, or discreetly to consider the circumstances, and aptly to draw things to a point ; and all this joined with a very good nature, and a great respect to all men, as is daily more and more revealed. And for his experience it is easy to think that his training and helps hath made it already such, as many that have served long apprenticeship for it, have not attained the like. So as, if that be true, *Qui beneficium digno dat omnes obligat*,” not his father only, but the state, is bound unto her Majesty for the choice and employment of so sufficient and worthy a gentleman.

These men are grown to a singular spirit and faculty in learning and abusing the world ; such, as it seemeth, although they are to purchase a particular dispensation for all other men, yet they have a dispensation dormant to lie for the Catholic cause ; which moveth me to give the reader a taste of their writings, such as are written and are not merely gross and palpable ; desiring him, out of their own writings, when any shall fall into his hands, to increase the roll at least in his own memory.

We retain in our calendars no other holy-days but such as have their memorials in the Scriptures ; and, therefore, in the honour of the Blessed Virgin we only receive the feasts of the Annunciation and the Purification, omitting the other of the Conception and the Nativity, which Nativity was used to be celebrated upon the 8th of September, the vigil whereof happened to be the nativity of our Queen, which, though we keep not holy, yet we use therein certain civil customs of joy and exultation, as ringing of bells, bonfires, and such like ; and likewise make a memorial of the same day in our calendar whereupon they have published, that we have expunged the nativity of the Blessed Virgin, and put instead thereof a

not only stories of fifty years old to supply their pages, also taken all the persecutions of the primitive church under the heathen, and translated them to the practice of England; as that of worrying priests, under the skins of bears, by dogs, and the like.

I conclude then that I know not what to make of this excess of avouching untruths, save this: that they may truly chaunt in their quires "Linguam nostram magnificabimus, labia nostra nobis sunt;" and that they that have long ago forsaken the truth of God, which is the touch-stone, must now hold by the wet-stone; and that their ancient pillar of lying wonders being decayed, they must now hold by lying slanders, and make their libels successors to their legend.

There is a remarkable coincidence in design and character between this first political performance of Bacon's and the pamphlet with which Burke, at a somewhat more advanced age, commenced his career as a political writer, his 'Observations on a late publication entitled 'The Present State of the Nation,' published in 1769.

In the modern editions there are attached to these 'Observations' a few sentences entitled 'The First Copy of my Discourse touching the Safety of the Queen's Person,' and two short paragraphs entitled 'The First Fragments of a Discourse, touching Intelligence and the Safety of the Queen's Person.' These additions were first printed in Stephens's Second Collection (1734) from the originals in the Archbishop's Library at Lambeth.

The next piece is also contained in the First Part of the *Resuscitatio*;—'A True Report of the Detestable reason intended by Doctor Roderigo Lopez, a Physician attending upon the Person of the Queen's Majesty, whom he, for a sum of money promised to be paid him by the King of Spain, did undertake to have destroyed by poison; with certain circumstances both of the plotting and detecting of the said treason; penned during the Queen's life.' Lopez was executed on the 7th of June, 1594; and this account appears to have been drawn up immediately after he had been condemned.

Then follow several pieces relating to the unfortunate Earl of Essex. Bacon's early connexion with Es

ar of rest, in which he did not obtain at her Majesty's hands me notable addition, either of honour or profit.

But he, on the other side, making these her Majesty's favours thing else but wings for his ambition, and looking upon em not as her benefits but as his advantages, supposing that be his own metal which was but her mark and impression, is so given over by God, who often punisheth ingratitude by abition, and ambition by treason, and treason by final ruin,

he had long ago plotted it in his heart to become a dangerous supplanter of that seat whereof he ought to have been a incipal supporter; in such sort as now every man of common use may discern not only his last actual and open treasons, t also his former more secret practices and preparations wards those his treasons, and that without any gloss or interpreter, but himself and his own doings.

For first of all the world can now expound why it was that did aspire, and had almost attained unto a greatness like to the ancient greatness of the "præfectus prætorio" under the iperors of Rome, to have all men of war to make their sole id particular dependence upon him; that with such jealousy id watchfulness he sought to discountenance any one that ight be a competitor to him in any part of that greatness, at with great violence and bitterness he sought to suppress id keep down all the worthiest martial men which did not appropriate their respects and acknowledgements only towards mself. All which did manifestly detect and distinguish, at it was not the reputation of a famous leader in the wars hich he sought, as it was construed a great while, but only wer and greatness to serve his own ends, considering he ver loved virtue nor valour in another but where he thought should be proprietary and commander of it, as referred to mself.

So likewise those points of popularity which every man took tice and note of, as his affable gestures, open doors, making a table and his bed so popularly places of audience to suitors, nyng nothing when he did nothing, feeding many men in air discontentments against the queen and the state, and the e; as they were ever since Absalom's time the forerunners of easons following, so in him they were either the qualities of a ture disposed to disloyalty, or the beginnings and concey- ms of that which afterwards grew to shape and form.

But as it were a vain thing to think to search the roots and t motions of treasons, which are known to none but God that

ned and continued by supplies, were not sufficient to
the prosecutions there to period. The second, that the
had not been put to the root of the tree, in regard there
had been made a main prosecution upon the arch-traitor
in his own strength, within the province of Ulster.
And, that the prosecutions before time had been inter-
and interrupted with too many temporizing treaties,
by the rebel did ever gather strength and reputation to
the war with advantage. All which goodly and well-
ing discourses, together with great vaunts that he would
the earth tremble before him, tended but to this, that the
should increase the list of her army, and all proportions
sure and other furniture, to the end his commandment
be the greater. For that he never intended any such
tion may appear by this, that even at the time before
ing into Ireland, he did open himself so far in speech to
his inwardest counsellor, "That he did assure himself
any of the rebels in Ireland would be advised by him :"
was he from intending any prosecution towards those in
he took himself to have interest. But his ends were two ;
to get great forces into his hands ; the other to oblige the
the rebellion unto him, and to make them of his party.
Two ends had in themselves a repugnancy ; for the one
d prosecution, and the other treaty ; but he that meant
too strong to be called to account for anything, and
besides, when he was once in Ireland, to engage himself
for journeys that should hinder the prosecution in the
book things in order as they made for him : and so first
thing, as was said, but trumpet a final and utter prose-
against Tyrone in the north, to the end to have his
augmented.

In the same strain the account proceeds to the close.
For example, in the narrative of the misguided earl's
sane attempt in London, which brought him to
afford, we are told that he and his adviser Cuffe
set down between them the ancient principle of
; and conspirators, which was to prepare many
acquaint few ; and, after the manner of miners, to
ready their powder, and place it, and then give
it in the instant." And all Essex's movements
throughout set in the most unfavourable light, and
first construction put upon them.

the matter; which though it be but an idle digression because I am not willing to be short in commemorating his benefits, I will presume to trouble your Lordship relating to you the manner of it. After the queen hath taken me the solicitor's place, for the which his Lordship had long and earnest suitor on my behalf, it pleased him to send me from Richmond to Twickenham Park, and to bridle me, and said, Mr. Bacon, the queen hath denied me this for you, and hath placed another. I know you are the part of your own matter, but you fare ill, because you have chosen me for your mean and dependance; you have wasted your time and thoughts in my matters; I die (these were very words) if I do not somewhat towards your fortune. I shall not deny to accept a piece of land, which I will give upon you. My answer I remember was, that for myself it was no great matter; but that his Lordship's offer made me call in mind what was wont to be said when I was in prison of the Duke of Guise, that he was the greatest usurer in France because he had turned all his estate into obligations, more than that he had left himself nothing, but only had bound numbers of persons to him. Now my Lord, said I, I would not have you imitate his course, nor turn your state thus by great debts into obligations, for you will find many bad debtors. I will take me take no care for that, and pressed it; whereupon I said to my Lord, I see I must be your homager, and hold land of you in gift, but do you know the manner of doing homage in France? Always it is with a saving of his faith to the king and his Lords, and therefore my Lord, said I, I can be no more your homager I was, and it must be with the ancient savings; and if you will be to be a rich man; you will give me leave to give it back to some of your unrewarded followers. . . . After this, the while since my Lord was committed to my Lord Keeper, I came divers times to the queen, as I had used to do, to the causes of her revenue and law business, as is well known for the reason of which accesses, according to the ordinary charter of the court, it was given out that I was one of them that were in the queen against my Lord of Essex. These speeches I will not tell, nor I will not think that they grew any way from Majesty's own speeches, whose memory I will ever honour as they did she is with God, and "*Miserum est ab illis laqueis quibus non possis queri.*" But I must give this testimony to my Lord Cecil, that one time in his house at the Savoy he came to salt with me directly, and said to me, Cousin, I hear

it not, that you should do some ill office to my Lord ; for my part, I am merely passive and not active in on, and I follow the queen, and that heavily, and I not ; my Lord of Essex is one that in nature I could with as well as any one living ; the queen indeed is my , and I am her creature, I may not lose her, and the arse I would wish you to take ; whereupon I satisfied far I was from any such mind. And as sometimes to pass that men's inclinations are opened more in a in a serious matter ; a little before that time, being the middle of Michaelmas term, her Majesty had a to dine at my lodge at Twickenham Park, at which had (though I profess not to be a poet) prepared a irectly tending and alluding to draw on her Majesty's ment to my Lord, which I remember also, I showed to erson, and one of my Lord's nearest friends, who com- it ; this though it be, as I said, but a toy, yet it plainly in what spirit I proceeded, and that I was it only to do my Lord good offices, but to publish and myself for him ; and never was I so ambitious of any my lifetime, as I was to have carried some token or rom her Majesty to my Lord, using all the art I had procure her Majesty to send, and myself to be the mes- . . . And I was never better welcome to the queen, : made of than when I spake fullest and boldest for which kind the particulars were exceeding many, for an example I will remember to your Lordship one as at one time I call to mind, her Majesty was speak- fellow that undertook to cure, or at least to ease, my of his gout, and asked me how it went forward ; and I Majesty that at first he received good by it ; but after urse of his cure he found himself at a stay or rather e queen said again, I will tell you, Bacon, the error of nanner of these physicians, and especially these em- to continue one kind of medicine, which at the first , being to draw out the ill humour ; but after they t the discretion to change the medicine, but apply wing medicines, when they should rather intend to l corroborate the part. Good Lord, Madam, said I, ly and aptly can you speak and discern of physic ed to the body, and consider not that there is the like of physic ministered to the mind, as now in the case ord of Essex, your princely word ever was that you l ever to reform his mind, and not ruin his fortune ; I

ters of envy without place, or without strength; and I
 w at chess a pawn before a king is ever much played
 a. A great many love me not, because they think I have
 against my Lord of Essex, and you love me not because
 know I have been for him; yet will I never repent me
 I have dealt in simplicity of heart towards you both,
 out respect of cautions to myself, and therefore, *vivus*
msque pereo. If I do break my neck, I shall do it in a
 mner as Master Dorrington did it, which walked on the
 tlements of the church many days, and took a view and
 rey where he should fall; and so, Madam, said I, I am not
 mple but that I take a prospect of mine overthrow, only
 hought I would tell you; so much that you may know
 t it was faith, and not folly, that brought me into it, and so
 vill pray for you. Upon which speeches of mine, uttered
 h some passion, it is true her Majesty was exceedingly
 ved, and accumulated a number of kind and gracious
 ds upon me, and willed me to rest upon this, *Gratia mea*
ficat, and a number of other sensible and tender words and
 onstrations, such as more could not be, but as touching
 Lord of Essex, *ne verbum quidem*. Whereupon I departed,
 ing, then determined to meddle no more in the matter,
 that I saw would overthrow me, and not be able to do
 any good. . . . It is very true also, about that time
 Majesty taking a liking of my pen, upon that which I for-
 rly had done concerning the proceeding at York House, and
 wise upon some other declarations, which in former times
 her appointment I put in writing, commanded me to pen
 t book which was published for the better satisfaction of
 world, which I did, but so as never secretary had more
 ticular and express directions and instructions in every
 nt how to guide my hand in it; and not only so, but after
 t I had made a first draught thereof, and propounded it to
 tain principal councillors, by her Majesty's appointment it
 s perused, weighed, censured, altered, and made almost
 w, writing according to their Lordships' better consideration;
 rein their Lordships and myself were both as religious and
 ions of truth as desirous of satisfaction, and myself indeed
 e only words and form of style in pursuing their direction.
 I after it had passed their allowance, it was again exactly
 used by the queen herself, and some alterations made
 n by her appointment: nay, and after it was set to print,
 queen, who, as your Lordship knoweth, as she was ex-

worldly thing concerning himself which he
dear than their good opinion. The ground
nself takes his stand upon, as we have seen,
atever he had done was done in his duty and
he queen and the state. Now, let us admit,
e of the argument, that the claims of the
paramount to all other claims. Still, such
t be clearly established, before they can be
set aside all others. In a case of state neces-
t perhaps have been Bacon's duty actually, at
bidding, to perform execution upon Essex with-
nd. But where was the state necessity in
case? Bacon was one of the queen's coun-
in the law at a time when his friend was
brought to trial on a charge affecting his life;
it necessary that he of all men should take
ducting the prosecution? Would he have
the prisoner had been his father or his
Would any ill consequences whatever have
the state if he had declined doing so? Would
injury or risk have been to his own profes-
sion? And must it not, therefore, have
rd to that, and not his duty and service to
and the state, which made him do what he
e had been the only lawyer in England that
been got to conduct the prosecution, believ-
ets us understand that he did, in the guilt of
the extreme point charged in the indictment,
e been his duty not to refuse his services;
case stood, any such pretence was ludicrous.
therefore, naturally expected that a sense of
not any feeling of gratitude, would have
m from even giving so much as his presence
ance to a proceeding by which it was sought
life of one to whom he had been so much
he had been to Essex. It was thought that
more to have appeared as one of the counsel
n against such a friend, than he ought to have
nst his own brother. He boasts that he would
himself either false-hearted or faint-hearted.

criminality of the prisoner.* This, it must be
 ledged, was following directions, and leaving
 ing else out of sight, a very long way.

an unfinished discourse, entitled 'Of the True
 ess of the Kingdom of Britain,' addressed 'to
 ames,' and first published in Stephens's Second
 ion (1734), Bacon proposes to consider the gene-
 ject of the real force and power of a state, "first,
 ifuting the errors, or rather correcting the ex-
 of certain immoderate opinions, which ascribe too
 to some points of greatness, which are not so
 al, and by reducing those points to a true value
 stimation; then, by propounding and confirming
 other points of greatness which are more solid and
 al, though in popular discourse less observed; and,
 itly, by making a brief application, in both these
 of the general principles and positions of policy
 ie state and conditions of these your Kingdoms."
 en proceeds :—

hese the former part will branch itself into these ar-

, That in the measuring or balancing of greatness,
 commonly too much ascribed to largeness of territory.
 ndly, That there is too much ascribed to treasure or

dly, That there is too much ascribed to the fruitfulness
 soil, or affluence of commodities.

, fourthly, That there is too much ascribed to the
 h and fortification of towns or holds.

latter will fall into this distribution :—

t, That true greatness doth require a fit situation of the
 or region.

ndly, That true greatness consisteth essentially in popu-
 and breed of men.

rdly, That it consisteth also in the value and military
 tion of the people it breedeth, and in this that they
 profession of arms.

rthly, That it consisteth in this point, that every common

* See Criminal Trials, I. 332, 333, note.

air swords by their sides undrawn, through the
of Italy, at that time abounding in wealth after
, and that without resistance, and to seize and
countries and places it pleased them? But it was
ience of that time alone, but the records of all
concur to falsify that conceit, that wars are de-
the sharpest sword, but by the greatest purse.
ery text or saying of Mutianus, which was the
his opinion, is misvouched: for his speech was,
sunt nervi belli civilis," which is true, for that
cannot be between people of differing valour: and
se in them men are as oft bought as vanquished;
f foreign wars you shall scarcely find any of the
chies of the world, but have had their foundations
d contemptible beginnings, being in that point also
he heavenly kingdom, of which it is pronounced,
ei non venit cum observatione." Persia, a moun-
try, and a poor people in comparison of the Medes
vinces which they subdued. The state of Sparta,
in poverty was enacted by law and ordinance, all
and silver and rich furniture being interdicted.
Macedonia, a state mercenary and ignoble until
Philip. The state of Rome, a state that had poor
beginnings. The state of the Turks, which hath
the terror of the world, founded upon a transmi-
ne bands of Sarmatian Scythes that descended in
manner upon the province that is now termed
: out of the remnants whereof, after great variety
prang the Ottoman family. But never was any
state so visibly and substantially confirmed as this
: pre-eminence, yea, and predominancy of valour
re, as by the two descents and inundations of
and indigent people, the one from the east and the
e west, that of the Arabians or Saracens, and that
s, Vandals, and the rest, who, as if they had been
eritors of the Roman empire then dying, or at
impotent and aged, entered upon Egypt, Asia,
ik, Spain, France, coming to these nations not as
as to a patrimony, not returning with spoil but
planting themselves in a number of provinces,
ue their progeny and bear their names till this day.
e men had no other wealth but their adventures,
title but their swords, nor no other press but their

: of the *Resuscitatio* (1657), the following are extracts:—

do not find it strange, excellent king, that when Heraclius (he that was surnamed the Obscure) had set forth a certain book (which is not now extant), many men took it for discourse of nature, and many others took it for a treatise of policy; for there is a great affinity and consent between the order of nature and the true rules of policy: the one being nothing else but an order in the government of the world, and the other an order in the government of an estate; and, therefore, the education and erudition of the kings of Persia was a science which was termed by a name then of great reverence, but now degenerate and taken in the ill part; for the Persian magic, which was the secret literature of their kings, was an application of the contemplations and observations of nature unto a sense politic, taking the fundamental laws of nature and the branches and passages of them as an original, first model, whence to take and describe a copy and imitation for government.

After this manner the foresaid instructors set before their pupils the examples of the celestial bodies, the sun, the moon, the rest, which have great glory and veneration, but no intermission, being in a perpetual office of motion for cherishing, in turn and in course, of inferior bodies, exercising likewise the true manner of the motions of government, which, though they ought to be swift and rapid, in effect of dispatch and occasions, yet are they to be constant regular, without wavering or confusion.

So did they represent unto them how the heavens do not clutch themselves by the earth and the seas, nor keep no dead stock nor untouched treasures of that they draw to them from below: but whatsoever moisture they do levy and take from the elements in vapours, they do spend and turn back again in showers, only holding and storing them up for a time, to send to issue and distribute them in season.

Now, to speak briefly of the several parts of that form, whereby states and kingdoms are perfectly united, they are divided (the sovereignty itself) four in number, union in name, union in language, union in laws, union in employments.

For name, though it seem but a superficial and outward matter, yet it carrieth much impression and enchantment.

The general and common name of Graecia made the Greeks

And as for employments, it is no more but in indifferent
nd, and execution of that verse :—

“Tros Tyriusque mihi nullo discrimine agetur.”

Another paper relating to the same subject, and also
ntained in the First Part of the *Resuscitatio*, is en-
ed ‘ Certain Articles or Considerations touching the
ion of the Kingdoms of England and Scotland ; col-
ted and dispersed for his Majesty’s better service.’
commences as follows :—

Your Majesty being, I doubt not, directed and conducted
a better oracle than that which was given for light to
neas, in his peregrination (*antiquam exquirite matrem*),
a royal, and, indeed, an heroical, desire to reduce these
kingdoms of England and Scotland into the unity of their
ient mother kingdom of Britain. Wherein, as I would
lly applaud unto your Majesty, or sing aloud that hymn
inthem “*Sic itur ad astra* ;” so, in a more soft and sub-
sive voice, I must necessarily remember unto your Majesty
warning or caveat, “*ardua, quae pulchra* :” it is an action
requireth, yea, and needeth much, not only of your Ma-
r’s wisdom, but of your felicity. In this argument I pre-
ed, at your Majesty’s first entrance, to write a few lines
ed scholastically and speculatively, and not actively or
tically, as I held it fit for me at that time, when neither
r Majesty was, in that your desire, declared, nor myself in
service used or trusted. But now that both your Majesty
opened your desire and purpose with much admiration,
of those who gave it not so full an approbation ; and that
self was, by the Commons graced with the first vote of all
Commons, selected for that cause : not in any estimation
ny ability (for therein so wise an assembly could not be so
sh deceived), but in an acknowledgment of my extreme la-
rs and integrity in that business, I thought myself every
bound both in duty to your Majesty, and in trust to that
use of Parliament, and in consent to the matter itself, and in
formity to mine own travails and beginnings, not to neglect
pains that may tend to the furtherance of so excellent a
k ; wherein I will endeavour that that which I shall set
n be *nihil minus quam verba* : for length and ornament
speech are to be used for persuasion of multitudes, and not
formation of kings : especially such a king as is the only

, and the post-nati are naturalized subjects of England time forwards; for, by our laws, none can be an alien that is of another allegiance than our Sovereign Lord's. For there be but two sorts of aliens whereof we mention in our law: an alien ami, and an alien enemy; the former is a subject of a state in amity with the and the latter a subject of a state in hostility; but he be one or other, it is an essential difference unto the of an alien if he be not of the King's allegiance: as it evidently in the precedent of Ireland, who, since be subjects to the crown of England, have ever been able and capable as natural subjects, and yet not by vote or act of Parliament, but merely by the common the reason thereof. So, as there is no doubt, that every of Scotland was and is in like plight and degree, since Majesty's coming in, as if your Majesty had granted partly your letters of denization or naturalization to every, and the post-nati wholly natural. But then, on the side, for the time backwards, and for those that were in, the blood is not by law naturalized, so as they cannot it by descent from their ancestors without act of parliament. And therefore, in this point, there is a defect in the of subjection.

In matter of religion, the union is perfect in points of doctrine but in matter of discipline and government it is im-

perfect on the continent, it is true there are no natural boundaries mountains, or seas, or navigable rivers; but yet there are signs and memorials of borders, of which point I have spoken

In the language, it is true the nations are unius labii, but yet not the first curse of disunion, which was confusion of tongues, whereby one understood not another; but yet the is differing, and it remaineth a kind of mark of disunion. But for that, *tempori permittendum*, it is to be left; for considering that both languages do concur in the chief office and duty of a language, which is to make a self understood, for the rest it is rather to be accounted, as I said, a diversity of dialect than of language; and, as in my first writing, it is like to bring forth the enrichment of one language by compounding and taking in the proper significant words of either tongue, rather than a continuance of two languages.

stening to the tunes and harmonies of the harp; and soon after called likewise the stones and the woods to remove and stand in order about him: which fable was anciently interpreted of the reducing and plantation of kingdoms, when people of barbarous manners are brought to give over and discontinue their customs of revenge and blood, and of dissolute life, and of theft, and of rapine, and to give ear to the wisdom of laws and governments: whereupon, immediately followeth the calling of stones for building and habitation, and of trees for the seats of houses, orchards, and enclosures, and the like.

This work, therefore, of all other most memorable and honourable your Majesty hath now in hand, specially if your Majesty join the harp of David, in casting out the evil spirit of superstition, with the harp of Orpheus in casting out desolation and barbarism.

The second consequence of this enterprize is the avoiding of that inconvenience which commonly attendeth upon happy times, and is an evil effect of a good cause. The revolution of this present age seemeth to incline to peace almost generally in these parts; and your Majesty's most Christian and virtuous affections do promise the same more specially to these our kingdoms. An effect of peace in fruitful kingdoms where the stock of people, receiving no consumption nor diminution by war, doth continually multiply and increase must, in the end, be a surcharge or overflow of people more than the territories can well maintain; which, many times insinuating a general necessity and want of means into all estates, doth turn eternal peace into internal troubles and seditions; now what an excellent diversion of this inconvenience is ministered by God's providence to your Majesty in this plantation of Ireland, wherein so many families may receive sustentation and riches; and the discharge of them also out of England and Scotland may prevent many seeds of future perturbations. So that it is as if a man were troubled for the avoidance of water from the place where he hath built his house, and afterwards, should advise with himself to cast those waters, and to turn them into fair pools or streams for pleasure, provision, or use. So shall your Majesty, in this work, have a double commodity in the avoidance of people here and in making use of them there.

The third consequence is, the great safety that is like to grow to your Majesty's estate in general by this act, in discouraging all hostile attempts of foreigners, which the weakness of

First, when men come into a country vast and void of all things necessary for the use of man's life, if they set up together in a place, one of them will the better supply the wants of other: work-folks of all sorts will be the more continually at work without loss of time; when, if work fail in one place, they may have it fast by; the ways will be made more convenient for carriages to those seats or towns than they can be to a number of dispersed solitary places, and infinite other conveniences and easements scarcely to be comprehended in cogitation, will ensue in vicinity and society of people; whereas, if they build scattered, as is projected, every man must have a storehouse in himself for all things he must use, which cannot but breed much difficulty and no less waste.

Secondly, it will draw out of the inhabited country of Ireland provisions and victuals, and many necessities, because they shall be sure of utterance; whereas, in the dispersed situations, every man must reckon only upon that that he carries with him, as they do in provisions of ships.

Thirdly, the charge of bawnes, as they call them, to be made about every castle or house, may be spared when the situations shall be congregated only into towns.

And lastly, it will be a means to secure the country against future perils in case of any revolt and defection. For, by a right fortification, of no great charge, the danger of any attempts of kierns and swordmen may be prevented: the omission of which point, in the last plantation of Munster, made the work of years to be but the spoil of days. And if any man think it will draw people too far off from the grounds they are to labour, it is to be understood that the number of towns be increased accordingly, and likewise the situation of them be as in the centre, in respect of the portions assigned them. For in the champaign countries of England, where habitation useth to be in towns and not dispersed, it is no thing to go two miles off to plough part of their grounds; but two miles compass will take up a good deal of country.

Another paper published in the First Part of the *suscitatio* is entitled 'Advice to the King touching Sutton's Estate.' Its object is to make out the impropriety of permitting the erection of the Charter-House, which purpose Sutton had devoted his large fortune. *was probably written* subsequently to the death of *on, which happened in 1611, after he had obtained*

acquainted with your Majesty's disposition to advise any course of power or profit that is not grounded upon a right; nay further, if the defects be such as a court of equity may remedy and cure, then I wish that as Saint Peter's shadow did cure diseases, so the very shadow of a good intention may cure defects of that nature. But if there be a right and birth-right entailed in the heir, and not remediable by courts of equity, and that right be submitted to your Majesty, whereby it is in your power and grace what to do, then I do wish that this rude mass and chaos of a good deed were directed rather to a solid merit and durable charity than to a blaze of glory that will at crackle a little in talk and quickly extinguish. . . .

The next consideration may be, whether this intended hospital, as it hath a more ample endowment than other hospitals have, should not likewise work upon a better subject than the poor; as that it should be converted to the relief of armed soldiers, decayed merchants, householders, aged and infirm churchmen, and the like, whose condition, being of a sterner sort than loose people and beggars, deserveth both a more liberal stipend and allowance, and some proper place of relief, not intermingled or coupled with the basest sort of poor; which project, though specious, yet, in my judgment, will not answer the designment in the event in these our times. For certainly few men in any vocation which have been some body will bear a mind somewhat according to the conscience and remembrance of that they have been, will ever descend to that addition as to profess to live upon alms, and to become a corporation of declared beggars; but rather will choose to live securely, and as it were to hide themselves with some private ends: so that the end of such an institution will be, that it will make the place a receptacle of the worst, idlest, and most dissolute persons of every profession; and to become a cell of idlers, and cast serving-men, and drunkards, with scandal rather than fruit to the commonwealth. And of this kind I can find but one example with us, which is the alms knights of Windsor: which particular would give a man small encouragement to follow that precedent.

Therefore the best effect of hospitals is to make the kingdom, if it were possible, capable of that law, that there be no beggar in Israel. For it is that kind of people that is a burthen, an eyesore, a scandal, and a seed of peril and tumult in the state. But chiefly it were to be wished that such a beneficence towards the relief of the poor were so bestowed; as not only the

fore, his lordship manifesting himself not against the charity, but the manner of disposing it, it was not well done of those who have publicly defamed him by declaring their jealousies of bribery by the heir."

Respecting the very remarkable piece known as Bacon's 'Advice to Sir George Villiers,' Blackbourne says:—"I am to acquaint the reader that there are several copies of this performance:—the first, in 4to., as a single pamphlet, printed in 1661; the second, printed in Lloyd's *Worthies*, under the title of Buckingham, in the year 1670; and the third, in the *Cabala*. The second and third vary very little, inasmuch as they appear to be only two transcripts of one original; though they differ vastly from the first. But the worst circumstance in which they all agree is, that they are incorrect." As the copy in the *Cabala*, however, appeared in the second edition of that Collection published in 1663, as well as in the third published in 1691 (though not in the first published in 1654), it takes precedence over that given in Lloyd's *Worthies*. The title in the *Cabala* is, at full length:—"The Copy of a Letter conceived to be written to the late Duke of Buckingham when he first became a favourite to King James, by Sir Francis Bacon, afterwards Lord Verulam and Viscount St. Alban; containing some advices unto the Duke for his better direction in that eminent place of the Favourite; drawn from him at the entreaty of the Duke himself by much importunity." Blackbourne is puzzled by a passage which he conceives would imply that the paper had been written after the death of the Queen (in March, 1619); but the expression to which he refers—"when there is no queen or princess, as now"—may evidently be taken in two senses. The manner and substance, as well as the title, of the Letter show that it must have been addressed to Villiers in the early part of his career at court, or probably in 1615. It is upon the internal evidence, also, it must be confessed, that we are chiefly dependent in respect to the authorship; but it may be regarded as conclusive. Both the matter and the style have all the characteristics of

a fancy raised only by opinion cannot be long lived, unless the man have solid worth to uphold it; otherwise, when discovered, it vanisbeth suddenly. But when a favourite court shall be raised upon the foundation of merits, and when with the care of doing good service to the king shall be good dispatches to the suitors, then can he not choose but prosper.

The following passage is retained in the two later editions, that in the *Cabala* and that given by Lloyd:—

V. For peace and war, and those things which appertain to war; I in my own disposition and profession am wholly for peace, if please God to bless this kingdom therewith as for many years past he hath done; and,

I presume I shall not need to persuade you to the adorning of it, nor shall you need to persuade the king your master therein, for that he hath hitherto been another Solomon to his our Israel, and the motto which he hath chosen, *Beati iusti*, shows his own judgment: but he must use the means to reserve it, else such a jewel may be lost.

God is the God of peace; it is one of his attributes, thereby him alone we must pray, and hope to continue it: peace is the foundation.

And the king must not neglect the just ways for it; peace is the best protector of it at home, and providence for it is the best prevention of it from abroad.

Wars are either foreign or civil; for the foreign war by the king upon some neighbour nation, I hope we are secure; the king in his pious and just disposition is not inclinable unto; his empire is long enough, bounded with the ocean, the very situation thereof had taught the king and people to sit up their rests, and say *ne plus ultra*.

And for a war of invasion from abroad; only we must be over-secure; that is the way to invite it.

But if we be always prepared to receive an enemy, if the ambition or malice of any should incite him, we may be very confident we shall long live in peace and quietness, without attempts upon us.

To make the preparations hereunto the more assured: in the first place I will recommend unto you the case of our out-ports, the navy royal and shipping of our kingdom, which are the walls thereof, and every great ship is an impregnable fort;

do the better, by how much the examples are liker in instances to our own case, and more especially, if they upon persons that are greater or worthier than ourselves. As it savoureth of vanity to match ourselves highly in our conceit, so on the other side it is a good sound conclusion, if our betters have sustained the like events, we have the cause to be grieved.

In this kind of consolation I have not been wanting to myself though as a Christian I have tasted (through God's greatness) of higher remedies. Having therefore, through the study of my reading, set before me many examples both of ancient and later times, my thoughts, I confess, have chiefly rested upon three particulars as the most eminent and the most resembling. All three persons that had held chief place of authority in their countries, all three ruined not by war or any other disaster, but by justice and sentence as delinquents and criminals; all three famous writers, insomuch as the remembrance of their calamity is now as to posterity but a little picture of night-work, remaining amongst the fair excellent tables of their acts and works. And all three (that were anything to the matter) fit examples to quench man's ambition of rising again; for that they were every one of them restored with great glory, but to their further ruin and destruction, ending in a violent death. The men were Demosthenes, Cicero, and Seneca, persons that I durst not mix in affinity with, except the similitude of our fortunes had attracted it. When I had cast mine eyes upon these examples, I was carried on further to observe how they did bear up for unes, and principally how they did employ their leisure, being banished and disabled for public business; to the end that I might learn by them, and that they might be as well counsellors as my comforters. Whereupon I happened to consider how diversely their fortunes wrought upon them, especially at that point at which I did most aim, which was the employment of their times and pens. In Cicero I saw that during his banishment, which was almost two years, he was so softened and dejected as he wrote nothing but a few womanish epistles. I yet, in mine opinion, he had least reason of the three to be discouraged; for that although he was judged, and judged by the highest kind of judgment, in form of statute or law, he should be banished, and his whole estate confiscated and seized, and his houses pulled down, and that it should be lawful penal for any man to propound a repeal, yet his case

the aspersion of the old for taste's sake." This
 n, which was not without great and ample ad-
 and enrichment of the original English, espe-
 the Second Book, might stand, he held, in lieu
 First Part of the *Instauration*, and acquit the
 he had made in regard to that portion of the
 'Again," he continues, "because I cannot
 or desert the civil person [i.e. character] that I
 ne; which if I should forget enough would
 r; I have also entered into a work touching
 opounding a character of justice in a middle
 reen the speculative and reverend discourses of
 iers and the writings of lawyers, which are
 obnoxious to their particular law." He has
 ork, however, either completed or even com-
 to which this description is applicable. The
 hat he had once had, he says, of making a par-
 gest, or reconciliation, of the laws of his own
 e had laid aside, as being a work not to be
 shed by his own unaided forces and pen. He
 ght also that he owed in duty something to his
 which he had ever loved; "insomuch," he
 s, although my place hath been far above my
 et my thoughts and cares concerning the good
 vere beyond and over and above my place;" so
 ng as he was, no more able to do his country
 t remained to him to do it honour; and that he
 avoured to do in his *History of King Henry*
th. As for his *Essays*, and some other pieces
 uture, he counted them but as the recreations of
 studies, and as such it was his purpose to con-
 em; "though I am not ignorant," he adds,
 ose kind of writings would, with less pains and
 ent perhaps, yield more lustre and reputation
 me than those other which I have in hand."
 er concludes thus:—"But, revolving with my-
 writings, as well those which I have pub-
 those which I have in hand, methought
 all into the city, and none into the temple;
 ause I have found so great consolation, I

for all things to yourself. *Pollio*.—And what do they that practise it and profess it not? *Eupolis*.—They are the less hardy and the more dangerous. But come and sit down with us, for we were speaking of the affairs of Christendom at this time, wherein we would be glad also to have your opinion. *Pollio*.—My Lords, I have journeyed this morning, and it is now the heat of the day, therefore your Lordship's discourses need content my ears very well, to make them entreat mine eyes to keep open. But yet if you will give me leave to wake you when I think your discourses do but sleep, I will keep watch the best I can. *Eupolis*.—You cannot do us a greater favour. Only I fear you will think all our discourses to be but the better sort of dreams, for good wishes without power to effect are not much more. But, sir, when you came in, *Martius* had both raised our attentions and affected us with his speech he had begun, and it falleth out well to shake off our drowsiness, for it seemed to be the trumpet of a war. And therefore, *Martius*, if it please you begin again, for the speech was such as deserveth to be heard twice, and I assure you your auditory is not a little amended by the presence of *Pollio*. *Martius*.—When you came in, *Pollio*, I was saying freely to these lords, that I had observed how, by the space now of half a century of years, there had been (if I may speak) a kind of meanness in the designs and enterprises of Christendom. Wars with subjects, like an angry suit for a man's own that might be better ended by accord. Some petty requests of a town, or a spot of territory, like a farmer's purchase of a close or nook of ground that lay fit for him. And although the wars had been for a Naples, or a Milan, or a Portugal, or a Bohemia, yet these wars were but the wars of heathens of Athens, or Sparta, or Rome) for secular interest or ambition, not worthy the warfare of Christians. The Church, indeed, maketh her missions into the extreme parts of the nations and isles, and it is well; but this is *ecce unus gladius hic*. The Christian princes and potentates are they that are wanting in the propagation of the faith by their arms. Yet our Lord said on earth to the disciples, *Ite et praedicate*, said from heaven to Constantine, *In hoc signo vince*. What Christian soldier is there that will not be touched with a religious emulation to see an order of Jesus, or of Saint Francis, or of Saint Augustine, do such service for enlarging the Christian borders, and an order of Saint Jago, or Saint Michael, or Saint George, only to robe and feast, and perform rites and ob-

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some such covenant from the crown of Spain as with the Gibeonites, that that cursed seed should leave the land. And you see it was done by edict, not by the sword; the sword was not put into the people's hands. I think Martius did omit it not as making any judgment either way, but because it sorted not aptly with the law, being upon subjects, and without resistance. If you think good, give Martius leave to proceed his course, for methought he spake like a divine in *Martius*.—It is true, Eupolis, that the principal thing I have before mine eyes in that whereof I speak is religion. But nevertheless, if I should speak only of man, I should persuade the same thing. For there is no rise at this day for secular greatness and terrene honour upon infidels. Neither do I in this propound my imagination, but that which is proved by late experience of the same kind, though perhaps of less difficulty. In the age before that wherein we lived, opened the world subdued and planted Mexico, Peru, Chili, and the West Indies. We see what floods of treasure came into Europe by that action, so that the censure or bondage are raised since ten times, yea, twenty times. Of this treasure, it is true, the gold was accounted the more treasure for the most part, but the silver is

Besides infinite is the access of territory and the same enterprise. For there was never an hand that doubled the rest of the habitable world before man may truly term it, if he shall put to account that is, as that which may be hereafter by the action and colonizing of those countries. And may be affirmed (if one speak ingenuously) that it was the propagation of the Christian faith that was the advantage—discovery, entry, and plantation, but gold and temporal profit, and glory, so that what was first in man's mind was but second in man's appetite and intention. It may be said of the famous navigations and of Emanuel, King of Portugal, whose arms began to reach into India and Asia, and to acquire not only the trade of spices, and musk, and drugs, but footing and places in some parts of the East. For neither in this was the principal, but amplification and enlargement of dominion. And the effect of these two enterprises at both the East and the West Indies being met in

stirp or ancient families, a people that is without natural religion, and, as the Scripture saith, that regardeth not the lives of women, and without piety or care towards their children, a nation without morality, without letters, arts, or sciences, that can scarce measure an acre of land, or an hour of day, base and sluttish in buildings, diets, and the like, and a word a very reproach of human society, and yet this nation hath made the garden of the world a wilderness, for that, as it is truly said concerning the Turks, where Ottoman's horse sets foot people will come up very thin.

Attached to this dialogue is a short fragment printed by Tenison in the *Baconiana*, entitled 'The Lord Bacon's Questions about the Lawfulness of a War for the Propagation of Religion.' Bacon's own heading of the paper appears to have been, 'Questions wherein I deliver opinion, joined with arguments and authorities.' Perhaps the most spirited and eloquent of all Bacon's political writings is his last, entitled 'Considerations concerning a War with Spain, inscribed to Prince Charles, anno 1624.' It is printed in the Second Part of the *Resuscitatio*. The war with Spain, into which we succeeded in plunging the country as soon as Charles the same King in the beginning of the following year, was at this moment the great object upon which Buckingham was bent; and the present tract was probably prepared at the instigation of the favourite, or at least in the view of aiding and gratifying him. But, whatever we may think either of the motives by which Bacon may have been actuated or of the wisdom or true patriotism of the policy which he recommends, it is impossible to read the present paper without admiration of its brilliancy as a piece of writing, and of the vital force and buoyancy with which the old man has filled it. "Your Highness," it gracefully begins, "hath an imperial name. It was a Charles that brought the empire into France; a Charles that brought it first into Spain: why should not Great Britain have its turn?" He then sets himself in the first place to maintain the justice of the proposed war. It will be waged, he concludes, not for the Palatinate only, though that may

the more immediate object, "but for England, Scotland, Ireland, our King, our prince, our nation, all that we have." It is the overgrowing greatness of the giants that is its true cause and justification.

And to say truth, if one mark it well, this was in all ages the main piece of wisdom in strong and prudent counsels, to be in perpetual watch that the states about them should neither by approach, nor by increase of dominion, nor growing confederates, nor by blocking of trade, nor by the like means, have it in their power to hurt or annoy states they serve, and whensoever any such cause did but stir straightways to buy it out with a war, and never take peace at credit and upon interest. It is so memorable, it is yet as fresh as if it were done yesterday, how that invitate of kings, Henry VIII. of England, Francis I. of France, and Charles V. Emperor and King of Spain, were so provident as scarce a palm of ground could be won by either of the three, but that the other two would be to do their best to set the balance of Europe upright again.

And the like diligence was used in the age before by that sage wherewith Guiccardine beginneth his story, and maketh it were the calendar of the good days of Italy, which was distracted between Ferdinando, King of Naples, Lorenzo of Medici, Potentate of Florence, and Ludovico Sforza, Duke of Milan, designed chiefly against the growing power of the Medicians, but yet so as the confederates had a perpetual eye upon a other that none of them should overtop. To conclude therefore, howsoever some scholars men (otherwise reverend men, yet fitter to guide penknives than swords) seem precisely to stand upon it that every offensive war must be *ultio*, avenge that presupposeth a precedent assault or injury, yet never do they descend to this point which we now handle, a just fear, neither are they of authority to judge this question against all the precedents of time. For certainly as long as there are men, the seas, as the poets allude, of Prometheus, and of Epimetheus), and as long as reason is reason, a just fear will be a just cause of a preventive war, but especially if so part of the case that there is a nation that is manifestly excited to aspire to monarchy and new conquests, then other nations assuredly cannot be justly accused for not staying for the first blow, or for not accepting Polyphemus' courtesy to be that that shall be eaten up. . . .

Is it nothing that the crown of Spain hath enlarged the bounds thereof within the last six score years much more than the Ottomans? I speak not of matches or unions, but of wars, occupations, invasions. Granada, Naples, Milan, Portugal, the East and West Indies, all these are actual additions to that crown. They had a mind to French Britain, the better part of Picardy and Piedmont, but they have let fall their bit. They have to this day such a hovering possession of the Valtoline, as an hobby hath over a lark, and the Palatinate is in their talons, so that nothing is more manifest than that this nation of Spain runs a race still of empire, when all other states of Christendom stand in effect at a stay. Look then a little further into the titles whereby they have acquired and do now hold these new portions of their crown, and you will find them of so many varieties, and such natures, to speak with due respect, as may appear to be easily minted, and such as can hardly at any time be wanting. And therefore so many new conquests and purchases, so many strokes of the alarm-bell of fear, and awaking to other nations, and the facility of the titles which hand over head have served their turn, doth ring the peal so much the sharper and the louder.

Afterwards passing to the second part of his argument, he contends that, in every instance hitherto in which the two nations had encountered, England had come off with the advantage;—in the Netherlands in the year 1578, on that famous Lammas-day when the reputation of Don John of Austria was overthrown and buried, chiefly by the prowess and virtue of the English and Scottish troops under the conduct of Sir John Norris and Sir Robert Stuart; in 1580, when they were driven out of Ireland by Lord Grey, and the garrison which they had placed there in their Fort del Or compelled to yield themselves prisoners; in 1582, when Sir John Norris effected his memorable retreat from Ghent in spite of the opposition of the Prince of Parma and the entire Spanish army; in the expedition of Drake and Carlisle to the West Indies in 1585; in Drake's expedition to Cadiz in 1587—which last enterprise, Bacon says, he remembers, Drake, in the vaunting style of a soldier, would call the singeing of the King of Spain's beard. Then he proceeds:—

a state, than martial men, yet lined and assisted with
 dinate commanders of great experience and valour. The
 ne of the war made this enterprise at first a play at base.
 Spanish navy set forth out of the Groyne in May, was
 rsed and driven back by weather. Our navy set forth
 what later out of Plymouth, and bare up towards the
 of Spain to have fought with the Spanish navy, and
 y by reason of contrary winds, partly upon advertisement
 the Spaniards were gone back, and upon some doubt also
 they might pass by towards the coast of England whilst
 ere seeking them afar off, returned likewise into Plymouth
 t the middle of July. At that time came more confident
 rtisement, though false, not only to the Lord Admiral but
 court, that the Spaniards could not possibly come forward
 year, whereupon our navy was upon the point of disband-
 und many of our men gone ashore. At which very time the
 acible Armada (for so it was called in a Spanish ostenta-
 throughout Europe) was discovered upon the western coast.
 as a kind of surprise, for that, as was said, many of our
 were gone to land, and our ships ready to depart. Never-
 ss the Admiral, with such ships only as could suddenly
 ut in readiness, made forth towards them, insomuch as of
 hundred ships there came scarce thirty to work. How-
 with them and such as came daily in, we set upon them
 gave them the chace. But the Spaniards, for want of
 age, which they call commission, declined the fight,
 ng themselves continually into roundels, their strongest
 walling in the rest, and in that manner they made a
 g march towards Calais. Our men by the space of five
 x days followed them close, fought with them continually,
 e great slaughter of their men, took two of their great
 , and gave divers others of their ships their death's wounds,
 eof soon after they sank and perished, and in a word dis-
 ed them almost in the nature of a defeat, we ourselves in
 meantime receiving little or no hurt. Near Calais the
 iards anchored, expecting their land forces, which came

It was afterwards alleged that the Duke of Parma did
 icially delay his coming. But this was but an invention
 pretension given out by the Spaniards, partly upon a
 ish envy against that duke being an Italian, and his son
 mpetitor to Portugal, but chiefly to save the monstrous
 and disreputation which they and their nation received
 he success of that enterprise. Therefore their colours and

: them in such terror as they cut their cables and anchors in the sea. After, they hovered some two or about Graveling, and there again were beaten in a at what time our second fleet, which kept the was come in and joined to our main fleet. There-paniards entering into further terror, and finding of their ships every day to sink, lost all courage, of coming up into the Thames mouth for London, ign was, fled on towards the north to seek their ng still chased by the English navy at the heels, re fain to give them over for want of powder. The cotland the Spaniards could not endure, neither s invaders land in Ireland, but only ennobled some : thereof with shipwrecks; and so going northwards ney had any doubt of being pursued, at last, when ut of reach, they turned and crossed the ocean to ng lost fourscore of their ships and the greater part n. And this was the end of that sea-giant, the Armada, which, having not so much as fired a ours at land, nor taken a cock-boat of ours at sea, rough the wilderness of the northern seas, and, ac- the curse in the Scriptures, came out against us l fled before us seven ways: serving only to make lgment of an astrologer long before given, *octoges- is mirabilis annus*, or rather to make good, even nishment of all posterity, the wonderful judg- od poured down commonly upon vast and proud

.
ear 1591 was that memorable fight of an English the Revenge, under the command of Sir Richard memorable, I say, even beyond credit, and to the ome heroical fable. And though it were a defeat, eded a victory, being like the act of Samson that men at his death than he had done in the time of

This ship for the space of fifteen hours sat like a hounds at the bay, and was seized and fought by fifteen great ships of Spain, part of a navy of ps in all; the rest, like abettors, looking on afar off. st the fifteen ships that fought, the great St. Philippo hip of fifteen hundred ton, prince of the twelve sea- ich was right glad when she was shifted off from the This brave ship, the Revenge, being manned only ndred soldiers and mariners, whereof eighty la

fortification and strong in men on the other. But what the event? This, in few words: that after the Irish and Spanish forces had come on and showed themselves in some way, they were content to give the English the honour as to engage them first; and when it came to the charge, there appeared no other difference between the valour of the Irish and the Spaniards, but that the one ran away before they were charged, and the other straight after. And again, Spaniards that were in the town had so good memories of their losses in their former sallies, as the confidence of an army which came for their deliverance could not draw them on again. To conclude, there succeeded an absolute victory to the English, with the slaughter of above 2000 of the enemy, the taking of nine ensigns, whereof six Spanish, the taking of a Spanish general d'Ocampo prisoner, and this with the loss of so few of the English as is scarce credible, being, as it has been rather confidently than credibly reported, but of one man, the cornet of Sir Richard Graeme, though not a few more. There followed immediately after the defeat a present surrendering up of the town by composition, and not only so, but avoiding, by express articles of treaty accorded, of all other Spanish forces throughout all Ireland, from the places and forts where they had settled themselves in greater strength, as in regard of the natural situation of the places, than that was of the town: which were Castlehaven, Baltimore, and Beerhaven. Indeed they went away with sound of trumpet, for they did nothing but publish and trumpet all the reproaches they could devise against the Irish land and nation, insomuch as d'Aquila said in open treaty, that, when the Devil upon the mount showed Christ all the kingdoms of the earth and the glory of them, he did not doubt but the Devil left out Ireland, and kept it for himself.

There is a short paper in Stephens's Second Collection entitled 'Notes of a Speech concerning a War with Spain,' which appears in the greater part to be only a rough draught of the 'Considerations;' but the following rapid summary is distinguished both by its spirit and finish:—

You do not find that for this age, take it for a hundred years, there was ever any encounter between Spanish and English of importance, either by sea or land, but the English came off with the honour: witness, the Lammas-day, the

Low Countries, Denmark, divers of the princes of Germany, and others. As for the comparison of Spain, as it was and as it is now, you will for good respects forbear to speak; only you will say this, that Spain was then reputed to be the wisest council of Europe, and not a council that will be at the whistle of a favourite.

The remaining pieces that come under the head of Bacon's Political Writings are the following:—‘Speech in Parliament, 39 of Elizabeth [1597], upon the motion for a subsidy,’ printed in the First Part of the *Resuscitatio* (157); ‘A Proclamation drawn for his Majesty’s First Council in [1603], prepared but not used,’ in Stephens’s Second Collection (1734); ‘A Draught of a Proclamation touching his Majesty’s Style, 2do Jacobi [1604], prepared, not used,’ in Stephens’s Second Collection; ‘A Speech made by Sir Francis Bacon, Knight, chosen by the Commons to present a Petition touching Purveyors; delivered to his Majesty in the Withdrawing-Chamber Whitehall, in the Parliament held 1mo et 2do Jacobi [1603], the First Session,’ in the First Part of the *Resuscitatio*; ‘A Speech used by Sir Francis Bacon, Knight, in the Honourable House of Commons, 5to Jacobi [Feb. 1607], concerning the article of the General Naturalization of the Scottish Nation,’ in the First Part of the *Resuscitatio*; ‘A Speech used by Sir Francis Bacon, Knight, in the Lower House of Parliament, by occasion of a motion concerning the Union of Laws’ [1606 or 1607?], in the First Part of the *Resuscitatio*; ‘A Retort made by Sir Francis Bacon, Knight, in the House of Commons, of a Speech delivered by the Earl of Salisbury, and another Speech delivered by the Earl of Northampton, at a Conference concerning the Petition of the Merchants upon the Spanish Grievances, Parliament 1mo Jacobi’ [1607], in the First Part of the *Resuscitatio*; ‘Certificate to his Majesty, touching the Projects of Stephen Proctor relating to the Penal Laws,’ in Stephens’s Second Collection; ‘A Speech used to the King by his Majesty’s Solicitor, being chosen by the Commons as their mouth and messenger for the presenting to his Majesty the Instrument or Writing of the

; 'His Lordship's Speeches in the Parliament, Lord Chancellor, to the Speaker's Excuse, and to Speaker's Oration' [1621], in the First Part of the *citatio*.

Most of these Speeches are strongly marked with the passion of Bacon's peculiar intellect, and there is hardly one of them that does not contain something interesting or striking; but the limits to which we are confined make any further account of them impossible in the present work.

For with regard to Bacon's LETTERS can we do more than merely enumerate the several published collections of them in the order of their appearance. All Bacon's Letters that have yet seen the light have been originally, we believe, in the following publications:—1. 'Cabala, sive Scrinia Sacra,' Part I., 4to. Lon. 1654; the Same, Part II., 4to. Lon. 1654; 3. 'Resuscitatio,' Part I., fol. Lon. 1657; 4. 'A Collection of Letters made by Sir Tobie Mathews, Knt.,' 8vo. Lon. 1663; 5. 'Cabala,' Second Edition, fol. Lon. 1663; 'Resuscitatio,' Part II., fol. Lon. 1670 and 1671; 'Baconiana,' 8vo. Lon. 1679; 8. 'Cabala,' Third Edition, folio. Lon. 1691; 9. Stephens's First Collection, 4to. Lon. 1702; 10. Stephens's Second Collection, 4to. Lon. 1734; 11. 'Letters, Speeches, Charges, &c., of Francis Bacon, Lord Viscount St. Albans, Lord Chancellor of England; by Thomas Birch,' 8vo. Lon. 1763. The Letters that have been collected from these various sources may amount to some-what about seven hundred in all; but many others still remain in manuscript. Bacon's Letters are all deserving preservation, either for the worth of the matter in themselves, on their own account, or for the illustration they throw upon his other writings, upon the character of his mind, upon the history of his life, or upon that of his age; and we have every reason to believe that the world may ere long see an edition of all of them that can now be recovered, by a gentleman in the highest degree qualified to do so, to the task he has undertaken. That publication

we have no doubt, will be recognised with by far the most important contribution it made to the biography of Bacon, which wish an example, the first we have yet had in which his writings ought to be edited.

Bacon left no descendants. "Child-chaplain Rawley," he had none; which, if the means to perpetuate our names after ourselves he had other issues to perpetuate his name his brain; in which he was ever happy as Jupiter was in the production of Pallas. A want of children detract from the good assortment during the intermarriage, whom he put much conjugal love and respect, with many endowments, besides a robe of honour which her withal, which she wore unto her dying twenty years and more after his death." This last statement is—"Addita etiam tractu maritali, quam viginti plus annos post obitavit; totidem enim annis honoratissimo maritus fuit." The phraseology is somewhat anomalous, what the worthy chaplain designates the robe with which Bacon invested his wife, and which she wore to her dying day, must be, we suppose, rank of a peeress to which she was raised by marriage. It deserves to be noticed that Rawley's sketch which he gives of the life of his illustrious master passes over what is called his fall without so much allusion to anything of the kind having ever evincing much more delicacy and sensibility of point than Bacon himself. And it is curious that Bayle, writing nearly a century after he had not with all his inquisitiveness heard of the catastrophe that terminated the political career of the Lord Chancellor of Learning as well as of England.

* Who was the original author of this expression? In a preface of considerable length, in a little volume entitled 'The Felicity of Queen Elizabeth Times, with other Things, by the Right Honourable Francis Lord Bacon, Viscount St. Alban,'

Handwritten text on a piece of paper, possibly a letter or document, with some visible ink bleed-through from the reverse side. The text is written in a cursive script and is mostly illegible due to the image quality. The paper is aged and has a yellowish tint. There are some dark spots and stains on the paper, particularly along the left edge. The text appears to be organized into several paragraphs, with some lines starting with capital letters. The overall appearance is that of an old, handwritten document.

ADDITIONS AND CORRECTIONS

- Vol. I. p. 16 l. 24, for "appeared Bacon's first publication as far as is known," read "Bacon wrote a tract, which ever, is not known to have been then published, entitled
- l. 1 of note, for "B. Brit.," read "Biog.
- p. 88, l. 9, for "probably in the same year," read "some short time after."
- p. 113, line 5 from foot, for "three hundred" read "these hundred."
- p. 116, l. 2 of note, *dele* "here" before "quoted."
- p. 213, l. 24, for "very short, and can scarcely that was prepared," read "extends to only a single graph."
- l. 26, after "fragment," insert "first published in the First Part of the *Resuscitatio*."
- p. 220, at the end, add "The piece entitled *Praise of Henry Prince of Wales* (*In Henricum Principem Walliæ Elogium Francisci Baconi* was first published, in the original Latin, by Birch, along with English translation of his own, in his 'Letters, Speeches, &c., of Francis Bacon,' 1763."
- Vol. II. p. 7, l. 2 from foot, in note, for "Tennison" read "Tenison."
- p. 24, l. 11 from foot, after "Copernicus;" read "with no great respect of those of Galileo;"
- p. 170, l. 26, insert comma after "Leucippus."
- p. 200, note, for "p. 9," read "p. 89."
- p. 203, l. 14, for "escape" read "escapes."
- p. 210, l. 9 from foot, for "1651," read "1670."
- p. 218, l. 5, for "callendar," read "calendar."

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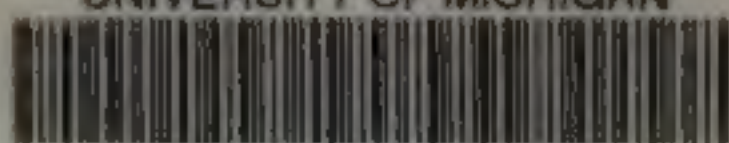
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